VTLS 1701 Kraft Drive • Blacksburg, VA 24060-6350 USA • +1-540-557-1200 • FAX +1-540-557-1210 • WWW.VTLS.COM

July 11, 2001

Patricia M. Guise, CPPB
Purchasing Department
Winchester Hall
12 East Church Street
Frederick, Maryland 21701

Dear Ms. Guise:

We appreciate the opportunity to recommend our Virtua ILS—Integrated Library System for Frederick County. The enclosed package describes this solution in detail and addresses each of the specifications in the Request for Proposal. With very few exceptions, the Virtua ILS solution meets or exceeds the stated requirements.

Because Frederick County Public Libraries is a long-term customer, we have applied a full credit, at today's prices, to products currently owned by FCPL. Why? The answer is simple. VTLS Inc. wants to continue our relationship with Frederick County Public Libraries. We could think of no better way to express this than to continue to protect the financial investment you made with VTLS Inc., in 1993. Basically, you are buying a new third generation product with dollars spent in 1993.

We hope the enclosed overview, detailed response, quotation, financial information, and contractual documents are precisely what you asked for. If not, please contact me. We will be most happy to arrange a demonstration of Virtua ILS for the library. We feel that the more detailed your examination, the more reasons you will find for selecting Virtua ILS for your automation needs.

If during the course of the RFP review, there are questions, please do not hesitate to contact me at 800-468-8857 or by email at shaverb@vtls.com.

Best Regards,

Rebecca W. Shaver

Rebecca W. Shaver
Regional Account Executive
Installed Customer Base

PURCHASING DEPARTMENT
FREDERICK COUNTY, MARYLAND

Winchester Hall
12 East Church Street
Frederick, Maryland
21701

PHONE 301-694-1067
FAX 301-694-2521

COMMISSIONERS

David P. Gray
President

Terre R. Rhoderick
Vice President

Jan H. Gardner

Ilona M. Hogan

John L. Thompson, Jr.

COUNTY MANAGER

Ronald A. Hart

COMPTROLLER/ DIRECTOR OF FINANCE

Douglas D. Browning, CPA

PURCHASING DIRECTOR

Michael F. Haifley, CPPO

CHARACTER COUNTS!
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June 29, 2001

RFP#01-77, Library Automation Software
(#0000000275)

Addendum #1

The following information is to be incorporated into the above referenced RFP by way of reference. Please acknowledge receipt of this Addendum by including a copy of this page in the Technical portion of your response.

An electronic copy of this RFP and all Addenda can be found at the following Web site: **www.co.frederick.md.us/govt/rfp.**

MFH/js

End of Addendum #1

Acknowledged.
B. Shaner

Winchester Hall
12 East Church Street
Frederick, Maryland
21701

PHONE 301-694-1067
FAX 301-694-2521

COMMISSIONERS

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PURCHASING DEPARTMENT
FREDERICK COUNTY, MARYLAND

Acknowledged
B Shaver

July 3, 2001

RFP #01-77, Library Automation Software

Addendum #2

The following information is hereby incorporated into the above mentioned bid by way of reference. Acknowledge receipt of this addendum by photocopying this page and enclosing it in the Technical portion of your response.

Implementation Schedule (page 2)

Vendors can expect to begin this project in early September since Board of County Commissioner approval is necessary before a contract can be signed.

In lieu of the required implementation schedule that uses server hardware already on site at FCPL, vendors may submit an implementation schedule that requires the purchase of a new server. Vendors should note that cost may prohibit FCPL from purchasing a new server.

System Capacity Requirements (page 3)

All of FCPL's PC's currently run Windows 95. Any new PCs that are purchased or any PCs that are replaced will have Windows 2000.

Server Architecture (page 3)

FCPL would like to use its present server, an HP9000 K380. Cost may prevent us from purchasing a new server. We do expect to purchase additional memory, disk drives, etc. If the cost of upgrading our existing server exceeds the cost of purchasing a new server FCPL may consider purchasing a new server.

FCPL currently uses UNIX specifically HP-UX. Frederick County Government currently uses NT.

FCPL's present HP9000 also serves as a Web server.

FCPL currently uses Oracle 7. If an upgrade is necessary the vendor must state this on the exceptions portion of the cost page and also must include any costs associated with this upgrade.

Evaluation (page 4)

FCPL may require vendors to provide a demonstration of their software.

Vendor Response (page 5 - 7)

Backups (page 6)

Backups are currently run using a script. After implementation of the new system installed as a result of this RFP, FCPL would prefer to perform system backups without shutting down access to the database.

Support of Other Languages (page 6)

As the population of Frederick County grows it has become more diverse. Vendors must list the other languages, such as Spanish, French, etc. that their system supports.

Training (page 7)

Each vendor must list the major functional areas (public service, "back-of-house" and system administration) for which training will occur. For "back-of-house" areas, such as cataloging and system administration one training session must be held. For all public service areas, such as circulation and OPAC two training sessions must be held. Each training session must be able to accommodate a minimum of 9 and a maximum of 15 participants. Each vendor must provide the cost for this complete training package. Vendors must also include the cost of providing additional public service training sessions.

References (page 7)

As stated on page 7 vendors must submit the names of five (5) references.

System Requirements (page 8)

By User request and information module we mean those functions that allow a patron to place their own holds, view their own records, etc.

Information Gateway (WWW) should be deleted.

General Requirements (page 9)

Add to Number 9: Due to the nature of service provided by the Detention Center Library, FCPL requires that materials in this collection not be visible to patrons using the PACs in other library facilities or accessing our catalog remotely. Also materials in the collections of other Branch Libraries must not be visible to inmates using PACs at the Detention Center.

Page 10, Number 36: An example of third party software is Peoplesoft.

Client and User Interface Requirements (page 10-11)

The statement regarding "character-based client" should be deleted (#1a). The sentence should read:

____ Client software stored on the host machine that may be invoked from a remote workstation via a telnet session to provide minimal automation functionality without the need of local client software

Patron File (page 15)

Number 6 should read as follows:

_____6. The system must support at least 200 patron types.

MARC Holdings Records (page 20)

Vendors with systems that do not have a separate MARC Holdings screen should describe how their systems record and display this data, how the data is edited, the check-in procedure, and how consolidated holdings information is displayed.

Circulation Control (page 21)

Number 7 should read: The system must provide a method of batch-processing multiple items. This would allow staff to scan barcodes to change location codes, statuses, etc.

Preparation and Submittal of Proposal (page 60)

e. Material submitted does not have to be printed on both sides of the page.

Attached is pre-proposal sign-in sheet

Attachment
End of Addendum #2.
PMG/cmg

FREDERICK COUNTY, MARYLAND
DEPARTMENT OF PURCHASING

12 E. CHURCH STREET
FREDERICK, MARYLAND 21701

Purchasing Director
MICHAEL F. HAIFLEY, CPPO, C.P.M.

Telephone 301-694-1047
Fax 301-694-2521

June 26, 2001

RFP#01-77, (0000000275), Library Automation Software

Pre-Proposal Conference 1:30 PM,
Purchasing Department Conference Room, First Floor

Firm Name	Address	Phone #	Fax #	Representative
DSA Inc	10400 Eaton Place, Suite 500 Fairfax, VA 22030	(703) 591-3704	(703) 591-8418	James Dunkel
INEA INTEGRATION / MODIS PROF SERVICES	3222 Pender Dr. FAIRFAX, VA 22030	240-401-1418		Derrek Hicks
TLC	Research Park Inwood WV	304-229-0100		Thomas La
VTLS Inc.	1701 Kraft Dr. Blacksburg, VA	540-557-1200 (p) 540-557-1210 (f)		Becky Sha
epixtech Inc,	10812 Pine Blf Dr. 46038	317.840-8089		
SQL STAR INTERNATIONAL	950 HERNDON PARKWAY, STE 110, HERNDON-VA-20170	571-331-0635 (PH) 703-481-6931 (FAX)		SUDIP ROY
G1440	10260 OLD COLUMBIA RD COLUMBIA, MD 21046	410 423 3900	410 423 3953	BRETT BELOTE
OLA FAKINLEDE	2945 MCGREE WAY OLNEY, MD 20832	877 627-6421 XIII		MARNIC TECHNOLOGIES INC

VTLS Inc. Exceptions to the Proposal Terms and Conditions

RECEIPT AND OPENING OF PROPOSAL

VTLS Inc. acknowledges.

TIME FOR RECEIVING PROPOSALS

VTLS Inc. acknowledges.

AWARD OF REJECTION OF PROPOSALS

VTLS Inc. acknowledges.

QUOTATION

VTLS Inc. has placed costs on the FCPL cost forms which were reproduced with FCPL permission. We attempted to maintain the same order, but added additional columns to provide more exact information.

TAXES

VTLS Inc. acknowledges.

PURCHASER'S RIGHT OF SELECTION

VTLS Inc. acknowledges.

BILLING AND PAYMENT

VTLS Inc. acknowledges.

RESERVATION AND ANNULMENTS

Terms and conditions for contract cancellation, what merits contract cancellation are detailed in the VTLS Inc. contracts included with our proposal. We will negotiate these to the mutual acceptance of both parties.

COMPLIANCE WITH SPECIFICATIONS

VTLS Inc., acknowledges.

ERRORS IN PROPOSALS

VTLS Inc., acknowledges.

SIGNATURE OF PROPOSALS

VTLS Inc., acknowledges.

CONFLICT OF INTEREST

VTLS Inc., acknowledges.

FREDERICK COUNTY EQUAL EMPLOYMENT OPPORTUNITY CLAUSE

VTLS Inc., acknowledges.

INDEMNIFICATION AND INSURANCE

VTLS Inc., acknowledges.

PREPARATION OF PROPOSALS - PLEASE READ CAREFULLY

VTLS Inc., acknowledges.

PROCEDURES

VTLS Inc., acknowledges.

PRIME CONTRACTOR

VTLS Inc., acknowledges.

SUBCONTRACTORS/SUBCONSULTANTS

VTLS Inc., acknowledges. VTLS Inc., does not intend to use subcontractors or subconsultants in the delivery of the proposed goods and services. For this reason, we have not returned the Joint Venture Forms.

CONFIDENTIALITY

VTLS Inc. requests that our full cost proposal be exempted from public inspection. Provision of our pricing structure to our competition provides an unfair advantage.

DEVIATIONS/EXCEPTIONS

VTLS Inc., acknowledges and believes we have complied by specifically stating if our products or services deviated from our understanding of the stated specification.

AVAILABILITY OF FUNDS

VTLS Inc., acknowledges.

DELIVERY OF GOODS

Shipping and handling fees will be added to invoices based on the actual shipping cost incurred.

TERMINATION FOR CONVENIENCE

VTLS Inc., acknowledges.

TERMINATION FOR DEFAULT

VTLS Inc., acknowledges.

BID BOND, CERTIFIED or CASHIER's CHECK

No indication of a bid bond, certified or cashier's check was determined.

PERFORMANCE BOND

No indication of a performance bond requirements was determined.

LIQUIDATED DAMAGES

Terms and conditions related to liquidated damages will be negotiated to the mutual acceptance of both parties.

PROVISION FOR OTHER AGENCIES

Frederick County Public Libraries is an existing customer and as such has received substantial discounts on a number of the line items. This same discount structure will be applied to Frederick County Community College as an existing VTLS99 customer. These discounts will not be applied to the other agencies listed here.

We do agree to follow the same pricing structure for up to 1 year from the date of the RFP submission. This pricing structure will be applied based on each site's unique requirements.

This can be discussed to the mutual satisfaction of both parties during contract negotiations.

TABLE OF CONTENTS

Part 1: Vendor Response

1. 1 Vendor Profile

1.2 System Growth & Conversions

1.3 Licensing Issues

1.4 Implementation Schedule

1.5 Maintenance & Support

1.6 File Reorganization

1.7 Backup

1.8 Security

1.9 Documentation

1.10 Language Support

1.11 Brief Description of Each Module

1.12 Community Information Database

1.13 Self Check Systems, etc.

1.14 Reports

1.15 Training

1.16 Test Database

1.17 References

1.17.1 References

1.17.2 Customer List

1.18 Subcontractors

1.19 Cost Summary

Part 2: Answers to Specific Questions

2.1 System Requirements

2.1.1 General Requirements

2.1.2 Client & User Interface Rquirements

2.1.3 Network/Information Access Requirements

2.1.4 Central Processing Unit

2.2 Required Database Features

2.2.1 Bibliographic Files

2.2.2 Database Files

2.2.3 Authority File

2.2.4 Patron File

2.2.5 Data Files for MARC & Item Records

2.3 Functional Specifications

2.3.1 Cataloging

2.3.1.1 Copy Cataloging

2.3.2 MARC Holdings Records

2.3.3 Circulation Control

2.3.12 Barcodes

Part 3: Appendixes

3.1 Sample Screens

3.2 Contractual Documents

3.3 Customer Service Flowchart

3.4 Virtua Reports

PART ONE:

VENDOR RESPONSE

VTLS Inc.

PART 1: VENDOR RESPONSE

1. 1: Vendor Profile

VTLS INC.

Experience

VTLS Inc. is the offspring of a project launched in 1974 at Virginia Polytechnic Institute and State University's Newman Library, a member of the Association of Research Libraries with more than 1.5 million cataloged volumes. Having explored available library automation alternatives and having found no system suitable for the needs of its libraries, Virginia Tech initiated a development project to create an automated library system. This forerunner of VTLS, consisting of an OPAC and an automated circulation system, was installed at Virginia Tech's Newman Library in September 1975.

By 1980, the software had evolved into the integrated library system known as VTLS. In 1983, VTLS became the first integrated library system to implement linked authority control and to feature full integration and support of the US MARC Format for bibliographic records. On July 1, 1985, after a decade of experience, VTLS Inc. was formed as a subsidiary corporation of Virginia Tech Intellectual Properties (VTIP), which granted VTLS Inc. exclusive, worldwide rights to enhance and market VTLS software.

The ensuing years witnessed dramatic growth for VTLS Inc. and innovative development of its system. In 1986-87, VTLS became the first integrated library system to fully support the US MARC Format for Holdings and Locations in a fully integrated Serials Control Subsystem. The same year, VTLS Inc. developed the first interface for importing LC MARC records from videodisc. On the heels of these accomplishments, VTLS Inc. developed capabilities for importing MARC records from CD-ROM, providing on-line access to microcomputer applications, and incorporating sound and images into the on-line catalog using the VTLS Inc. InfoStation. In 1994, VTLS Inc. completed its 20th major release, which included 25 new or enhanced features. In 1998, VTLS Inc. introduced Virtua.

VTLS Inc. has experienced consistent growth since its incorporation in 1985. It has steadily increased its customer base, staffing, and revenues each year. Throughout this period of growth, it has maintained a steadfast commitment to development and customer services, devoting thirty (30) percent of its corporate resources to research and development and another thirty (30) percent to customer support. Its consistent growth provides testimonial to corporate vision and dedication to its stated mission to develop, market, and support superior library automation products.

Organization and Staffing

VTLS Inc. consists of more than 100 full time employees dedicated to the development, support, and marketing of VTLS Inc. software products and services. Sixty-seven (67) percent of the company's resources are divided between development and support. Eleven (11) percent of VTLS Inc. resources are dedicated to marketing and sales, with the remainder divided between administration, accounting, and international marketing and support coordination.

VTLS Inc. is a Virginia Stock Corporation guided by a Board of Directors. The President of the corporation is Dr. Vinod Chachra, former Virginia Tech Vice President for Computing and Information Systems. Vice Presidents are Robert Taylor, Operations; Jack Bazuzi, International Operations; and George Nichols, Finance.

All services related to the VTLS Inc. software are provided by the company. The VTLS Inc. corporate headquarters are in Blacksburg, Virginia. Overseas offices are in Brazil, India, Malaysia, Poland, Spain, and Switzerland. Agents for VTLS Inc. are in Egypt, Germany, Italy, Kuwait, Malaysia, Philippines, Singapore, Switzerland, Taiwan, and Thailand.

Number of Personnel Assigned to Various Departments	**(as of 5/31/00)**
Administration	4
Customer Service	19
Development	22
Finance	7
Information Systems (ISD)	6
International (inc. overseas)	17
Marketing and Sales	10
Multimedia and Imaging	18
Quality	6
TOTAL	109

Bank References and Dun & Bradstreet Information

VTLS Inc. is a for-profit stock corporation incorporated in the state of Virginia. It is financed only through Virginia Tech Intellectual Properties (VTIP) and its stockholders. No other financing has been required. VTLS Inc. has banking relationships with several regional banks. Its checking accounts are maintained by the National Bank of Blacksburg, Virginia. Its auditors are Arthur Andersen & Co., SC.

VTLS Inc.'s financial history provides further testimonial to its corporate stability and success. Throughout the company's history, it has maintained profitability and avoided debts. It has maintained a favorable current ratio (assets divided by debts) throughout its corporate existence. Its line of credit with local banking institutions remains untouched.

VTLS Inc.'s Dun & Bradstreet reference number is 15-386-6769. It had a Dun & Bradstreet rating of 3A3 as of June 30, 1999.

ISO 9000

VTLS Inc. was approved for certification by the British Standards Institution (BSI), an ISO 9000 registrar, effective September 18, 1997. The company's ultimate corporate goal is to provide total customer satisfaction with regards to its people, products, and services. It is the first library automation solution provider to be ISO 9001 certified. In addition to working towards the ISO 9001 standards compliance, VTLS Inc. chose to be audited under the TickIT scheme. The TickIT scheme is a model for the design and development of products going through ISO 9001 certification. TickIT requires a registrar to use software development lifecycle guidelines during their audit of the company.

Environmental Policy

VTLS Inc. is a software company and, as such, does not perform or produce anything that has a direct impact on the environment. The Virtua software is designed to be fully compatible with energy-saving devices (e.g., printers and monitors with a "sleep"mode). Moreover, VTLS Inc. cooperates with Virginia Tech in a long-established recycling program to minimize office waste.

Warranty

VTLS Inc. software carries a 90-day warranty and nine (9) months of support included in the initial license fees. This ensures that a full year of support coverage is provided at no additional cost. VTLS Inc. is proposing proven software that is in live operation in customer sites worldwide.

If the Virtua software fails to meet acceptance testing criteria within the warranty period, the customer may (a) choose to terminate the contract with a 100% refund of any software license fees paid once software has been de-installed, or (b) renegotiate the acceptance period, during which VTLS Inc. must correct any problems with the software. Terms for failure after the acceptance period can be negotiated in the contract.

1.2: System Growth & Conversions

An integral part of the VTLS Inc. warranty is that the company guarantees that the system installed shall perform adequately and meet the computing needs of the customer for at least three (3) years following installation. Furthermore, it warrants that it has the necessary resources to maintain the proposed system, to provide for continuing support

and enhancement, and to train and support the customer in the use of the system for as long as these services may be required.

1.3: Licensing Issues

Please see Appendix, Contractual Documents.

1.4: Implementation Schedule

Frederick County Public Library

Project Start: Sat 9/1/01
Project Finish: Mon 12/31/01

Frederick County Public Library

Name	Duration	Start	Finish	Resource_Names	Notes
FREDERICK COUNTY PUBLIC LIBRARY VIRTUA PROJECT	82 days	Tue 9/4/01	Mon 12/31/01		
PROJECT PLANNING	10 days	Tue 9/4/01	Mon 9/17/01		
Assignment of Project Managers	1 day	Tue 9/4/01	Tue 9/4/01		
VTLS Project Manager	1 day	Tue 9/4/01	Tue 9/4/01	VTLS	
Frederick County Public Library Project Manager	1 day	Tue 9/4/01	Tue 9/4/01	Frederick County Public Library	

Customer Services assigns project team	1 day	Tue 9/4/01	Tue 9/4/01	VTLS	VTLS Customer Support assigns an analyst and librarian for project implementation.
VTLS sends Virtua Dataload Questionnaire	1 day	Wed 9/5/01	Wed 9/5/01	VTLS	Questions pertinent to dataload are asked here, including important information for parameter setting.
Development of Project Management Plan	9 days	Wed 9/5/01	Mon 9/17/01		
VTLS writes draft project management plan	5 days	Wed 9/5/01	Tue 9/11/01	VTLS	This includes a summary of project deliverables, methods of communication, proposed schedules and an outline of pertinent events in the project phase.
VTLS presents plan to customer	1 day	Wed 9/12/01	Wed 9/12/01	VTLS	
VTLS/Frederick County discuss project issues	3 days	Thu 9/13/01	Mon 9/17/01	VTLS and Frederick County Public Library	Modifications/changes to the project schedule take place here. VTLS and customer negotiate project plan as needed.
VTLS/Frederick County agree to project plan	0 days	Mon 9/17/01	Mon 9/17/01		
IMPLEMENTATION PHASE	75 days	Thu 9/6/01	Fri 12/21/01		
Production Environment Evaluation	11 days	Tue 9/18/01	Tue 10/2/01		
CPU, OS version verified	1 day	Tue 9/18/01	Tue 9/18/01	VTLS	Although server specifications are verified during the sales phase, it is important here to

					confirm server specifications for software delivery.
JCFSCHK and PARMPRINT sent to VTLS	1 day	Wed 9/19/01	Wed 9/19/01	Frederick County Public Library	Used to confirm database sizing and evaluate the customer's current database parameters in preparation for change to Virtua.
Disk Space availablity	2 days	Thu 9/20/01	Fri 9/21/01	VTLS	Re-confirm server specifications - amount of available disk space (GB), RAM, etc.
Verify configuration specifications	3 days	Mon 9/24/01	Wed 9/26/01	VTLS	Server setup specifications provided to the customer, based on database sizing, software requirements, etc.
Set server configuration and permissions	3 days	Thu 9/27/01	Mon 10/1/01	Frederick County Public Library	Customer is responsible for hardware configuration based on VTLS requirements provided (note that this service can also be purchased from VTLS).
VTLS login to server to examine configuration settings	1 day	Tue 10/2/01	Tue 10/2/01	VTLS	Direct telnet and ftp access from VTLS to customer's server is expected for timely installation and delivery. VTLS will check the server configuration to make sure it is properly set for software and database installation.

Installation/Upgrade					
Software package created at VTLS	2 days	Mon 10/1/01	Tue 10/2/01	VTLS	
Software/Test (training) database sent to Frederick County server via FTP	2 days	Wed 10/3/01	Thu 10/4/01	VTLS	
Software/Test (training) database installed on Frederick County via telnet	1 day	Fri 10/5/01	Fri 10/5/01	VTLS	
Installation tested on Frederick County server	1 day	Mon 10/8/01	Mon 10/8/01	VTLS	Ensure all software is setup and functioning correctly; ensure that client and gateway connectivity is functioning correctly.
SOFTWARE DELIVERED to Frederick County Public Library	0 days	Mon 10/8/01	Mon 10/8/01		
DATA CONVERSION & LOAD SUB-PHASE	75 days	Thu 9/6/01	Fri 12/21/01		
Frederick County completes questionnaire and returns for VTLS review	20 days	Thu 9/6/01	Wed 10/3/01	Frederick County Public Library	
Frederick County sets all parameters and permissions on test (training) database to prepare for migration	18 days	Mon 11/5/01	Fri 11/30/01		
Frederick County verifies data quality for migration (data cleanup, if needed)	18 days	Mon 11/5/01	Fri 11/30/01	Frederick County Public Library	
Frederick County reduces library operations (no cataloging, no authority	0 days	Wed 12/5/01	Wed 12/5/01	Frederick County	

control, no serials checkin, use circ backup)					
Complete data extraction (FTP/send backup tape to VTLS if needed)	1 day	Wed 12/5/01	Wed 12/5/01	VTLS	
Convert and load bibliographic records	3 days	Thu 12/6/01	Mon 12/10/01	VTLS	
Convert and load authority records	3 days	Thu 12/6/01	Mon 12/10/01	VTLS	
Frederick County evaluates data on VTLS server	1 day	Tue 12/11/01	Tue 12/11/01	Frederick County Public Library	
Convert and load serials holdings records	3 days	Wed 12/12/01	Fri 12/14/01	VTLS	
Convert and load item records	3 days	Wed 12/12/01	Fri 12/14/01	VTLS	
Convert and load patron and circulation records	3 days	Wed 12/12/01	Fri 12/14/01	VTLS	
Frederick County evaluates data on VTLS server	1 day	Mon 12/17/01	Mon 12/17/01	Frederick County Public Library	
Reloading any datasets (based on Frederick County evaluation if needed)	2 days	Tue 12/18/01	Wed 12/19/01	VTLS	
Database delivery and installation at Frederick County Public Library	1 day	Thu 12/20/01	Thu 12/20/01	VTLS	Completed via FTP and Telnet access to the customer's server.
Install gap data at Frederick County (circ backup)	1 day	Fri 12/21/01	Fri 12/21/01	Frederick County Public Library	
Virtua Production database available for Frederick County Public Library	0 days	Fri 12/21/01	Fri 12/21/01		
TRAINING PHASE	45 days	Thu 10/11/01	Fri 12/14/01		
Virtua Systems Training	17 days	Thu 10/11/01	Fri 11/2/01		

Installation/Upgrade					
Software package created at VTLS	2 days	Mon 10/1/01	Tue 10/2/01	VTLS	
Software/Test (training) database sent to Frederick County server via FTP	2 days	Wed 10/3/01	Thu 10/4/01	VTLS	
Software/Test (training) database installed on Frederick County via telnet	1 day	Fri 10/5/01	Fri 10/5/01	VTLS	
Installation tested on Frederick County server	1 day	Mon 10/8/01	Mon 10/8/01	VTLS	Ensure all software is setup and functioning correctly; ensure that client and gateway connectivity is functioning correctly.
SOFTWARE DELIVERED to Frederick County Public Library	0 days	Mon 10/8/01	Mon 10/8/01		
DATA CONVERSION & LOAD SUB-PHASE	75 days	Thu 9/6/01	Fri 12/21/01		
Frederick County completes questionnaire and returns for VTLS review	20 days	Thu 9/6/01	Wed 10/3/01	Frederick County Public Library	
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Convert and load patron and circulation records	3 days	Wed 12/12/01	Fri 12/14/01	VTLS	
Frederick County evaluates data on VTLS server	1 day	Mon 12/17/01	Mon 12/17/01	Frederick County Public Library	
Reloading any datasets (based on Frederick County evaluation if needed)	2 days	Tue 12/18/01	Wed 12/19/01	VTLS	
Database delivery and installation at Frederick County Public Library	1 day	Thu 12/20/01	Thu 12/20/01	VTLS	Completed via FTP and Telnet access to the customer's server.
Install gap data at Frederick County (circ backup)	1 day	Fri 12/21/01	Fri 12/21/01	Frederick County Public Library	
Virtua Production database available for Frederick County Public Library	0 days	Fri 12/21/01	Fri 12/21/01		
TRAINING PHASE	45 days	Thu 10/11/01	Fri 12/14/01		
Virtua Systems Training	17 days	Thu 10/11/01	Fri 11/2/01		

System Training on site (system administrator)	2 days	Thu 10/11/01	Fri 10/12/01	VTLS and Frederick County Public Library	
Pre-Implementation consulting (remote or on site; according to contract)	1 day	Mon 10/15/01	Mon 10/15/01	VTLS and Frederick County Public Library	In-depth discussion of the Virtua dataload questionnaire with library director/staff; discussion of important considerations and decisions needed for Virtua implementation.
Parameter setting/fit analysis on site	2 days	Thu 11/1/01	Fri 11/2/01	VTLS and Frederick County Public Library	Based on the pre-implementation consulting; set parameters using the test/training database. Additional discussion with customer to determine any other parameters that must be set prior to dataload.
Virtua Applications Training on site	5 days	Mon 12/10/01	Fri 12/14/01		
OPAC	0.5 days	Mon 12/10/01	Mon 12/10/01	VTLS and Frederick County Public Library	
Cataloging	1.5 days	Mon 12/10/01	Tue 12/11/01	VTLS and Frederick County Public Library	
Circulation	1 day	Wed 12/12/01	Wed 12/12/01	VTLS and Frederick County Public Library	
Serials	1 day	Thu 12/13/01	Thu 12/13/01	VTLS and Frederick County Public Library	
Acquisitions	1 day	Fri 12/14/01	Fri 12/14/01	VTLS and Frederick County Public Library	
Frederick County					

Persons Assigned to the Project and Their Resumes

Implementation and Management Teams

IMPLEMENTATION	
Gateway Design	Chris Dunavant, Mgr., Multimedia Development
Library Support	Sandy Boone, Mgr., Customer Support, Librarians
Project Management	Beth Bloch, MBA, Project Management
Technical Support	Aly Badr, Mgr., Customer Support, Technical Analysts
Training	Maurya Schweizer, PhD, Training Coordinator
MANAGEMENT	
Contract Management	Vinod Chachra, PhD, President
Customer Service & Training	Robert Pillow, MLS, Dir., Customer Service
Design & Consulting	John Espley, MLS, Dir., Design & Consulting
Finance & Accounting	George Nichols, CPA, VP Finance
Information Systems	Deveron Milne, Dir., Information Systems
Project Management	Robert Taylor, PhD, VP Operations
Marketing & Sales	J. Todd Blackwell, Dir., Marketing & Sales

Resumes, Implementation Team

☐ **Aly Badr, Mgr., Customer Support Technical Analysts.** Aly Badr has served as Manager of Customer Service's Technical Analysts Group since September 2000. He arrived at VTLS Inc. as a Technical Analyst in Customer Service in May 1997, bringing with him nearly 3 years of experience in the library field.

Badr began his career with a BS degree in Computer Science from Cairo University. Prior to joining the VTLS Inc. team, he worked in software development, network management, and database administration.

In his current position, Badr has been responsible for overseeing the full range of

customer support activities, including: routine and emergency call center support, remote and onsite training for new and existing customers, Account Management Services (AMS), including onsite and/or remote consulting and/or training; and, providing support and consulting to Project Managers.

Badr has also been instrumental in the development and marketing of VTLS Inc. products and services at home and abroad.

☐ **Beth Bloch, MBA, Project Manager.** Beth Bloch has served as Project Manager since 1998. She arrived at VTLS Inc. in her present position, bringing with her nearly 10 years of experience in customer service, specializing in quality control, insurance claim analysis and report writing, case work investigation and administration, project assessment, and accounting. She is knowledgeable of Allbase, Oracle, MPE, and UNIX, as well as all of the Ms Office applications.

Bloch began her career with a BA degree in Mathematics from Gettysburg College and an MBA from Lehigh University. Prior to coming to work at VTLS Inc. she worked as a Claim Advisor, Assistant Claim Consultant, Team Technician, and Service Specialist, and Claim Examiner for a large insurance company specializing in health insurance.

A talented and dedicated project manager, Bloch has been responsible for Virtua migrations form VTLS Classic at the Technological Educational Institution of Thessaloniki in Greece and The Universiti Tun Abdul Razak in Malaysia, and new Virtua implementations at the Uniao Educacional de Sao Paulo and the Universidade Federal de Vicosa in Brazil, Kebangasaan University in Malaysia, and the Institute d'Estadistica de Catalunya in Spain.

In her current position, Bloch has also been involved in systems software migrations (Allbase to Oracle, MPE to UNIX, etc.) at the Egyptian National Agricultural Library, Warsaw University Library, and the Upper Arlington Public Library in Ohio, a database conversion at Graceland College, and VTLS Classic implementations at Hebrew Union College and the University of the West Indies at Cave Hill.

☐ **Sandy Boone, Mgr., Customer Support Librarians.** Sandy Boone was promoted to Manager, Customer Support Librarians, in February 2000 after serving since 1996 as a Customer Services Librarian at VTLS Inc. Boone supervises Customer Services Librarians, recruits, evaluates, and hires new librarians, and conducts local and remote training on all of the VTLS Classic and Virtua modules.

Boone, who holds a BA in Technology and Management from the University of Maryland, has over 20 years of experience in the library field. She began her career as a Library Technician at the West Virginia School of Osteopathic Medicine Library, and has also worked at the National Agriculture Library as a Library Technician and LAN Coordinator.

Boone has been an active member of ALA since 1997. Currently she is a member of the ALCTS Acquisition Organization & Management Committee, as well as LITA's Leadership and Development Committee. She serves as the Acquisitions Liaison for the VTLS Inc. Users' Group.

☐ **Chris Dunavant, Mgr., Development, Multimedia**. Chris Dunavant has served as Manager of Development in Imaging and Multimedia since July 1999. He arrived at VTLS Inc. as the "computer guy" in the then relatively new Imaging Department, working first as "the sole programmer for all VTLS Inc. web related projects," then working his way through software design and development into the ranks of management as a software engineer

Dunavant, who has a BS in Computer Information Systems from Concord College in Princeton, WV, has worked independently as the principle software developer for a startup net solutions firm, been a network, system, and web administrator, done computer repair work, and been a service representative.

Since coming to work at VTLS Inc., Dunavant has programmed numerous imaging projects for the Library of Virginia, the VTLS Classic Gateway, and the Sistema BibliotecarioTicinese and Biblioteca de Catalunya projects. Since becoming a manager, he has overseen all of the web-based software projects, including our primary web product, the Virtua Web Gateway. He supervises three full-time software engineers and two part-time programmers.

☐ **Maurya Schweizer, MLS, PhD, Training Coordinator**. Maurya Schweizer has served as Training Coordinator since August 2000. She arrived at VTLS Inc. in her present position, bringing with her nearly 9 years of experience in the library field.

Schweizer began her career education and library science with a BA degree in Art History from the University of West Florida, a MLS from the University of North Carolina at Greensboro, and a PhD in Instructional Technology from Virginia Tech. Prior to coming to work at VTLS Inc., she worked for 3 years as a paraprofessional at the John C. Pace Library, University of West Florida, and for 6 years as a school library media specialist at Rockbridge County High School, Rockbridge County, Virginia.

In her current position, Schweizer has been responsible for developing the Virtua training guides, the training database, and the VTLS Inc. Certification Program, as well as internal programs in staff training and development.

Aly Badr

Sandy Boone

Beth Bloch

Resumes, Management Team

☐ **Vinod Chachra, PhD, President.** Vinod Chachra, president of VTLS Inc., is an internationally recognized lecturer and consultant in the field of information systems. He

designed the original Virginia Tech Library System (now called VTLS) and in 1985 founded VTLS Inc.

Chachra has been active in the library profession for more than 18 years. He represented Virginia in the White House Conference on Library and Information Sciences in 1979 and is a former member of the White House Task Force on Library and Information Services. He designed the statewide library networking system in West Virginia and was appointed as consultant to the Ministry of Education in Finland to help establish a national research information network. He served as consultant to the Virginia State Library, helping to design the Virginia Libraries Information Network (VLIN) and the statewide union catalog.

Earning his Ph.D. in industrial engineering and operations research at Virginia Tech, Chachra then served at Virginia Tech, from 1983 to 1985, as Vice President for - Computing and Information Systems and was responsible for orchestrating the statewide approval and local implementation of the Personal Computer Initiative.

Chachra has received many honors, including the Distinguished Information Sciences Award from the Data Processing Management Association, the CAUSE Award for Exemplary Leadership (CAUSE is the Professional Association for the Development, Use, and Management of Information Systems in Higher Education), and the Blacksburg Jaycees Man of the Year Award.

In 1992, Chachra was invited to be a member of the ALA delegation to Romania and to serve on the ALA International Relations Subcommittee Bibliotheca Alexandrina. He serves on the National Information Standards Organization (NISO) Board of Directors, has authored two books, contributed to a third, and written numerous journal articles.

☐ **John Espley, MLS, Director of Product Design & Consulting.** John Espley has worked with VTLS Inc. since the beginning of the system at Virginia Tech, where he was a cataloger at Carol M. Newman Library. Appointed in 1975 as cataloging representative to the library's Design Committee, he gradually increased his involvement with the Virginia Tech Library Systems automation project until he was working full time with the system. Since the incorporation of VTLS Inc. in 1985, he has worked for the company in many capacities, including Customer Support Librarian and as Director of Customer Services.

In his current capacity as director of design and consulting, Espley supervises a staff of librarians, technical support analysts, and support personnel. His primary responsibilities include managing staff, overseeing and implementing the design of Virtua, and overseeing department operations and services with a focus on assuring and augmenting customer satisfaction.

A graduate of the Library School at Brigham Young University, Espley is recognized as an expert on MARC formats and has served on the USMARC Advisory Committee. He is responsible for much of the company's training, especially in MARC and in applications, i.e., cataloging, circulation, acquisitions, etc., and for carrying out special projects as assigned by the president.

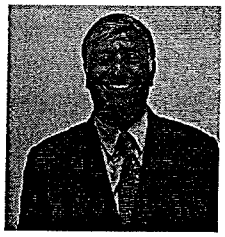
☐ **Robert Pillow, MLS, Director, Customer Services.** Robert Pillow has served as Manager of Customer Services since March 1999. He arrived at VTLS Inc. as a

where he last served as Executive Vice President of Engineering. In that position he was responsible for the management of engineering centers as well as for the successful delivery of engineering projects for customers throughout the United States.

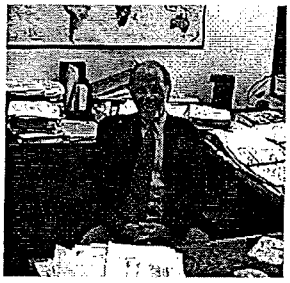
A registered professional engineer, Taylor holds a B.S., M.S. and Ph.D. in Industrial Engineering and Operations Research and has served on the faculty and managed computing activities at three public universities. He has published extensively in the areas of digital simulation, optimization techniques, information systems, and project management.

☐ **Todd Blackwell, Dir., Marketing and Sales.** J. Todd Blackwell joined VTLS Inc. as Director of Marketing and Sales after serving over thirteen years with an international, multi-billion dollar marketing and distribution firm. Blackwell has held various management positions and has received numerous awards over the past 13 years in the areas of national sales, marketing and management and brings to VTLS Inc. significant experience and expertise in those areas. He is responsible for corporate wide sales and marketing for VTLS Inc. within continental North America and Canada.

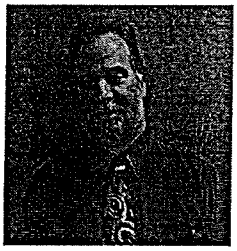
Blackwell holds a BS in Marketing/Management from the Pamplin College of Business at Virginia Tech. He has also completed graduate courses in Economics, Management, and Marketing at this same University.



Vinod Chachra



Robert Taylor



Robert Pillow

1.5: Maintenance & Support

Customer Services

When an existing customer or a new customer enters the Project phase, a team of one Librarian and one Analyst is assigned with the Project Manager. The Librarians will provide support throughout the project. When possible, the same Librarian and Analyst assigned to the project will deliver the customer training. This is a focused effort by the Managers of Customer Services to ensure that the customer's concerns and problems receive timely solutions. Once the initial training is complete, the customer will start using Virtua in a production mode. At this time, the customer account moves from a project phase to full customer support.

The customer will receive a turn over report that outlines any remaining unresolved project issues. The CS team will work to update contact and login information. From this point forward the customer will report problems to the hotline@vtls.com or via the toll-free 800 number. Problem reports are logged into the CS tracking database, assigned a tracking number and then distributed/assigned randomly to the customer services support staff. When a support representative is assigned the problem, they test and document the problem thoroughly. If CS cannot resolve the problem, it is turned over to Development to get the problem resolved. The customer will receive a problem tracking number for future reference. When the problem is corrected, it is assigned to an upcoming build of the software. The customer is notified that the problem is resolved and is given a projected date for the fix. When a new release of the software is released, the customer is notified via the VIRTUALS listserv. Release notes about changes and new features are posted on our VTLS web page at www.vtls.com. Other questions or suggestions for improvements should be directed to the Customer Service Managers at VTLS.

One year after the "go-live" date, VTLS delivers a two-day visit from VTLS Staff. The agenda for this visit is determined by the customer, but must be specified as a system visit or a librarian visit. If the customer elects not to have an onsite visit from VTLS staff, the customer can send staff to VTLS Inc for training. The annual visit must be used by the end of the contract year.

VTLS Customer Support services are available Monday through Friday from 8am to 8pm daily. After 8pm each evening and on weekends, a customer support analyst is available for emergency support.

1.6: File Reorganization

RECORD PROCESSING

Loading of Standard Format MARC Data

VTLS Inc. offers a variety of record processing services, including archive tape preparation, loading, and indexing, as well as record conversion from other formats. We load bibliographic and authority records in the US MARC format, and serials records in the US MARC Format for Holdings and Locations. We routinely use record conversion programs to create patron and item records in Virtua ILS.

Our procedures guarantee the integrity of your data. We create custom mapping programs from records extracted from your system. If the system being converted provides for MARC record extraction, as is often the case, the procedure is greatly simplified.

We have had considerable experience converting from other library automations systems. In some instances, competing vendors have been cooperative and have provided data structures to facilitate the process. In other instances, they have been uncooperative and have refused to provide any information, extraction programs, or assistance in the process. In either case, with or without the cooperation of other vendors, we routinely successfully extract bibliographic, authority, item, patron, and circulation data from local systems, perform the necessary conversion tasks, and deliver complete VTLS Inc. databases to our customer without data loss or data corruption.

As a part of the conversion process, we send to you sample sets of processed records for review, to ensure that all of the record processing we do is satisfactory. Only after you have approved the sample database is the entire database converted. All bibliographic, authority, and holdings/item data is migrated first. All data should be provided in the appropriate MARC ISO 2709 format. Item data will be generated from data in MARC Bibliographic or Holdings records as appropriate. If necessary, we can provide custom mapping of data in proprietary format to MARC format at additional cost. This may delay implementation, however, if for some reason data conversion proves to be unduly difficult.

Assuming that all bibliographic, authority and holdings/item data is provided to us in MARC format, conversion of sample records can be accomplished within two months of the contract signing (subject to scheduling and availability of resources). Once the library has reviewed and approved the sample records, conversion of the full databases can be performed. The time required for processing the databases varies, depending upon the number of records, the TCP/IP connection, whether migrations are done onsite or from remote locations, internet connections, etc.

Our record processing services include step-by-step preprocessing of your archive tapes:

1. Elimination of duplicate MARC records (i.e., "de-duping")
2. Stripping of unwanted tags
3. Conversion to data entry format

NOTE: This service, however, is offered at our standard price for MARC record tapes only. Any preprocessing that will be required should be clearly documented and provided to VTLS Inc. prior to contract signing.

Loading of Proprietary Record Formats

VTLS Inc. has considerable experience in converting and loading machine-readable data in proprietary format from a variety of record formats. Because it is not always obvious from the data structure how the data should be mapped into formats used in Virtua ILS, additional effort will be required for the proprietary formats. VTLS Inc. will provide the required format for import of non-standard records. It will be the responsibility of the

libraries to extract the records into the appropriate format. VTLS Inc. staff will be available during the initial consulting phase of the project to work with each library in determining the best possible mapping for these record types. Once each library has provided the data to VTLS Inc. in the required format, processing and loading can be performed according to the same procedures described above. Because the quantities of other types of records are much smaller than the bibliographic, authority and holdings/item data, the load can be performed concurrently with the bibliographic/authority/holdings loads and delivered at the time the full databases are delivered.

Please note that while we propose to load patron and acquisitions data, we do not recommend migrating transaction data due to the difficulty of ensuring concurrency. We strongly recommend running the current systems in parallel with Virtua ILS for a period of time equivalent to the standard loan period of materials. Using this procedure, all check-ins would occur on the old system while all new transactions occurred on Virtua ILS. At the end of the switchover period, most of the transaction data will have been cleared from the existing systems. Any data remaining is likely to be overdue or otherwise delinquent activity and can be printed and converted manually. This procedure is typically more economical than custom development of an automated process for converting the data. If, however, any of the libraries requires conversion of the data, the data structure(s) can be examined to determine the cost for migration of transaction data by VTLS Inc.

In the case of acquisitions transaction data, such a switchover process may prove to be too cumbersome. It is thus recommended to time the switchover to coincide with a new fiscal year, eliminating the need to migrate data that will be archived. Typically transaction data will be migrated with the order, account and vendor records from the old system. As with patron data, if a library cannot extract the data into the prescribed format, VTLS Inc. can provide custom data mapping services to library specifications at additional cost to be determined based on the complexity of the data handling.

VTLS Inc. can also work with data preprocessed by a third party. In this case, de-duped and cleaned up data would be delivered to VTLS Inc. in standard USMARC ISO 2709 format or the proprietary format identified by VTLS Inc. for database creation and loading.

VTLS Inc. has performed large-scale data processing and union catalog loading for Fundacao Getulio Vargas (Brazil) and the Library of Virginia, and database creation using data pre-processed by a third party for RERO, Switzerland.

Data Clean Up

VTLS Inc. can perform data clean-up services as a part of data processing. As a part of the standard processing services, we perform de-duping. Any additional processing we quote on the basis of your precise specifications. These specifications must include

details on how to handle specific fields, matching criteria for de-duping or merging, etc. Any additional data clean up beyond the standard de-duping services will involve additional costs to you.

1.7: Backup

See Brief Description of Each Module, Circulation, "Circulation Backup," below, p. 25.

The circulation backup system lets you continue automated circulation at times when the main system is unavailable. Circulation backup has the same interface as the Virtua Client and allows you to checkout, check in, renew, accept fine payments and create patron records. Later when the main system becomes available, you can upload the information recorded by the backup system to the server and load the transaction data into the Virtua Database.

1.8: Security

Powerful Security Features

Virtua emphasizes sophisticated user access controls, including security by individual users, user groups, and library locations. The ability to make modifications to all types of records and system settings is controlled by a security permissions matrix, which filters screen displays and menu options. The available security features are so comprehensive that it is even possible to restrict which system users have the authority to edit individual MARC tags.

1.9: Documentation. The Virtua library system comes equipped with three types of references to help you use the software efficiently and effectively:

- User's Guides
- Online Help
- What's this? Pop-up Help

Your staff can edit and/or translate all three types of references. To edit the online and pop-up help systems, we suggest that you purchase the help-authoring tool that we used to create them.

Because we are always looking to improve our guides and our online help, we give you ample opportunity to send us your comments and suggestions. A Reader's Comment Form is located at the back of each user's guide; an Interactive Reader's Comment Form is located on the documentation page of our Web site; and a Feedback button is available in the online help. We invite our customers to take advantage of these mechanisms to tell us what is helpful and what isn't.

User's Guides

The full set of user's guides consists of an installation guide, a getting started primer, a system reference guide, and a guide to the functionality of every client interface, subsystem, and module that constitutes the Virtua library system.

You will find the guides to be comprehensive and concise, containing a detailed index and plenty of step-by-step procedures and screen captures for ease of understanding. In addition, the online version of each guide offers a hyper linked table of contents, hyper linked internal references, and a Find feature.

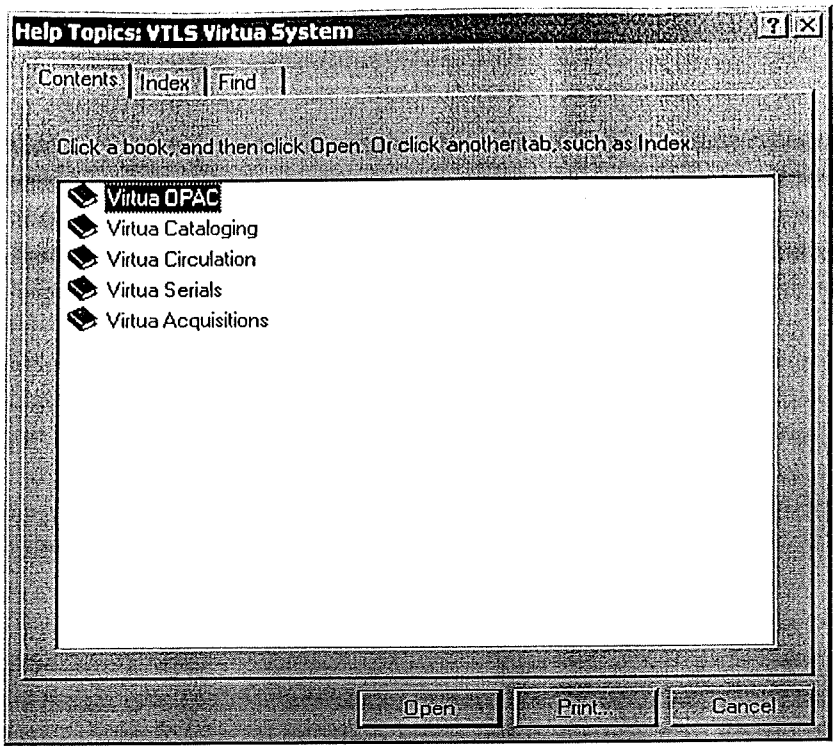
We produce the user's guides with Word 2000 and make them available to you in electronic format on a CD-ROM or over an ftp server. If your institution does not use Word as your word processor, we will also ship Word Viewer, which lets you view and print the guides.

Our user's guides are also available in PDF on the Internet at *www.vtls.com*. To view PDF files, all you need is the Adobe Acrobat Reader, which you can download free from our Web site.

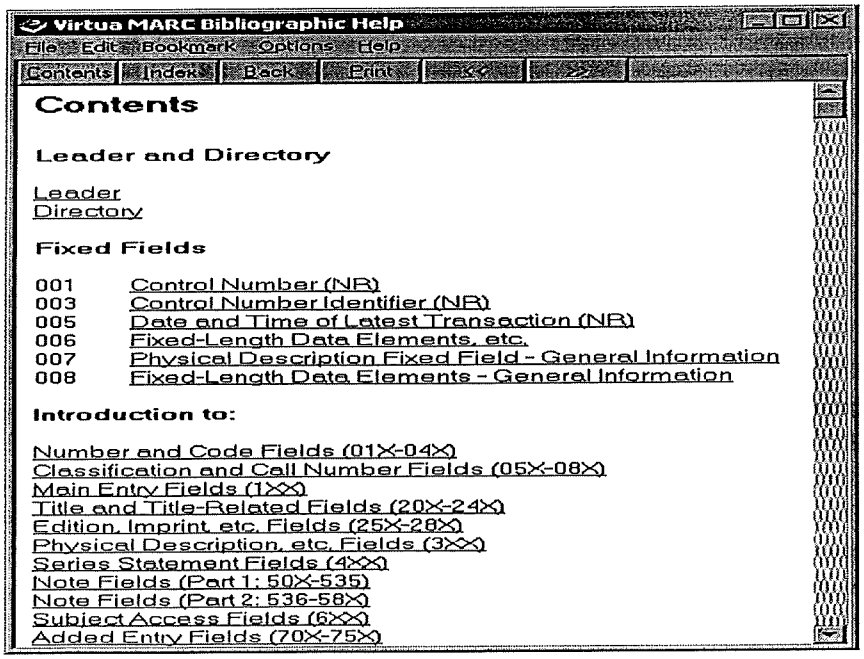
Online Help

In addition to user's guides, Virtua features Windows-based online help for different aspects of the system. You can access online help from the Help menu of the Virtua Client, Virtua System Client, Language Editor, and MARC View Editor. In the Virtua Web Gateway, you can access HTML help from a Help button on each screen.

In the Virtua Client, the Contents window of the online help looks like this:



Also in the Virtua Client, the Contents window of MARC format help looks like this:



The MARC format online help is also available as context-sensitive help in the Virtua MARC Editor. When you are creating or editing a MARC record, you only have to place your cursor on a MARC tag and press the F1 key to see the online help window for that tag.

What's this? Pop-up Help

Another access point for help in Virtua is via the right mouse click. Whether you doing a search of the OPAC, placing an item on reserve, in the process of creating a purchase order, or trying to edit the 008 fixed fields, What's this? Pop-up Help is only a right click away. This context-sensitive help is available for every button, display box, or text field on a Virtua window.

1.10: Language Support

What is Unicode?

Virtua software is compliant with the Unicode™ Standard, Version 2.0. Unicode is a fixed-width, uniform encoding scheme for written characters and text. Virtua supports a subset of this international character code, which includes characters for the major scripts of the world.

The Unicode Standard is modeled on the ASCII character set, but uses a 16-bit encoding scheme to support full multilingual text. The Virtua database stores Unicode character values in a transformation format called UTF-8. UTF-8 allows the transmission of character data between systems that require 8-bit oriented protocols.

Benefits of Unicode in Virtua

VTLS Inc is the first vendor to provide an automated library solution that incorporates all functional aspects of the Unicode standard. Better yet, Virtua is the only system that supports UnicodeTM in all its subsystems. Because Virtua was designed with multilingual support in mind, we incorporated Unicode as one of the most fundamental requirements for library systems that operate in a global environment. The most important aspect of the Virtua solution is that all data in all records are stored in the Unicode encoding scheme. Unicode implementation was not an afterthought, making implementation of new languages easier than in most other automation systems. This means that librarians can catalog and access records using their local language or any other language they wish to support.

Client Implementation of Unicode Support in Virtua

Full Unicode support is provided through the use of the Windows 2000 operating system. Libraries wishing to support more than one language with English will run Virtua in the Windows 2000 operating environment. Virtua supports any or all languages within the same database in the 2000 environment. In addition, all languages except right to left languages such as Arabic and Hebrew are supported within the NT environment. These languages are based on Arabic, Chinese, Cyrillic, Greek, Hebrew, Japanese, Korean, Latin and Tai.

The Virtua client also operates within Windows 95 and 98 for those customers supporting the native character set only. For those customers only implementing two languages, Virtua will also operate under the language of their choice. For instance, Virtua will continue to support Windows 95 with Chinese for support of Chinese and English, and Windows 95 with Hebrew for support of Hebrew and English.

Flexibility to Move from One Language to Another in all Subsystems

The most notable and sophisticated feature in Virtua's Unicode support is its ability to dynamically change from one language to another in all subsystems. For example, Virtua supports direct input, indexing, and display of characters in Unicode from a single, standard workstation. In this way, users can dynamically change the interface language and search language without impacting anyone else on the system. A cataloger can be cataloging an English record, but then need to add a tag in Traditional Chinese. The cataloger simply changes the display and input of the Virtua client to Traditional Chinese and enters the tag in the record. Multilingual titles may also be ordered through the Acquisitions subsystem.

Virtua Translator

Converting imported records is another feature of the Virtua implementation of Unicode. The Virtua translator converts all records not already encoded in Unicode to the Unicode character set. This can be done interactively or in batch mode via a load program. The Unicode implementation also allows for importing and exporting records in the full ALA character set.

The Virtua Language Editor

The Language Editor is a tool no library wishing to support multiple languages can do without. This nifty tool supports the language conversion for the languages the library chooses to support in the Virtua client. Your library staff can change the language of the tabs and buttons, the titles of windows, and the messages and prompts. The editor is also used to convert help text on the search windows in the OPAC. Customers may choose to

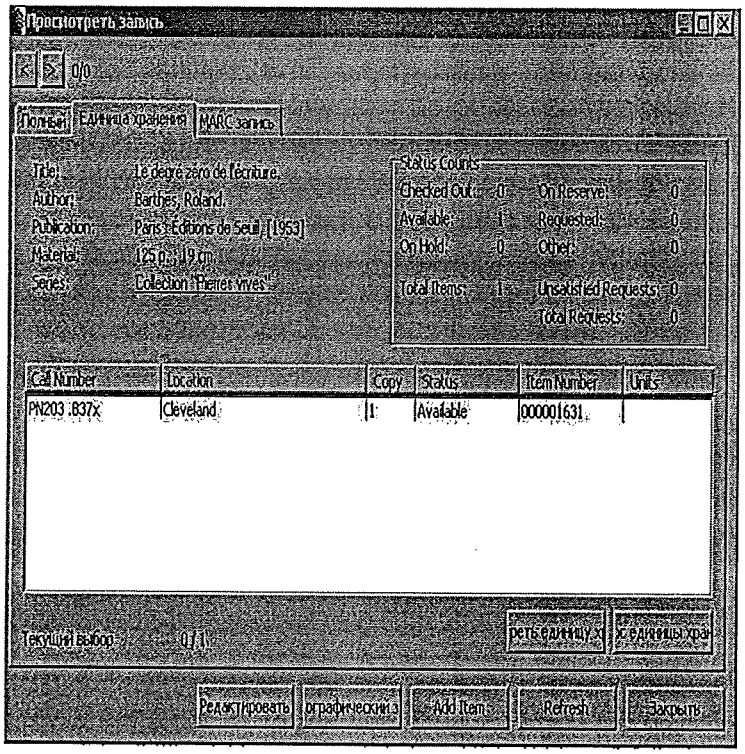
purchase the Language Editor to add other languages not currently offered, or to change the names of screens and customize the help files to suit their needs.

Language Support

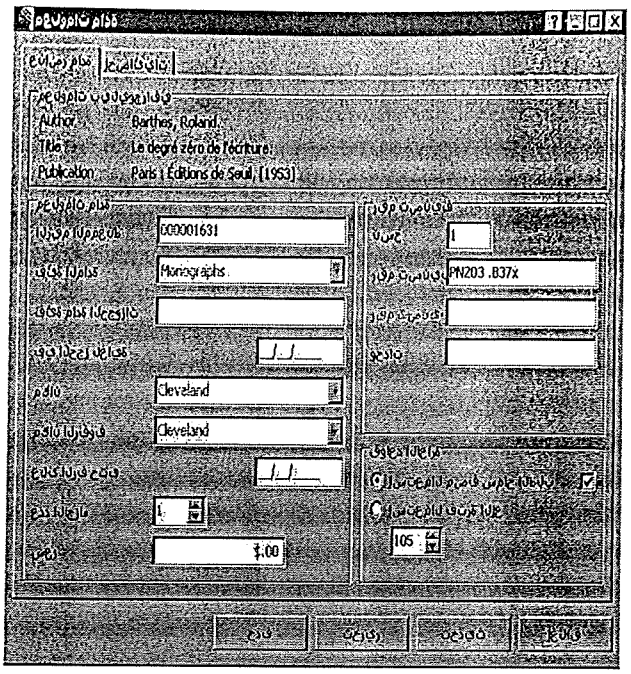
Currently, the Virtua implementation of Unicode supports languages based on the following character sets: Latin 1, Latin 2, Greek, Cyrillic, Turkish, Arabic, Chinese, traditional Chinese, Vietnamese, Korean, Hebrew, and Thai. As Virtua continues to evolve, users can expect support of additional languages.

Sample Screens

Virtua is capable of showing the same screen or drop-down menu in as many different languages as necessary.



Above: View Record in Russian, French, and English



Above: Item Information in Arabic, French, and English.

1.11: Brief Description of Each Module

Cataloging. Virtua is based on a suite of innovative system architectures chosen for their emphasis on ease of use, natural workflow processes, adherence to industry standards, and ready exploitation of the speed and sophistication of graphical user interface (GUI) workstation environments. Features of Virtua Cataloging & Authority Control include:

A System Designed for Catalogers

Emerging information formats and technologies are challenging catalogers to expand their talents into new areas, and Virtua, from VTLS Inc., has been specifically designed to help meet these challenges.

Access to Tools and Information

A key concept behind Virtua Cataloging is seamless access to tools and resources from a unified set of screens. Catalogers can directly access external copy cataloging data from within the Virtua software. Interfaces are included for a variety of sources, such as Online Bibliographic Utilities and CD ROMS including:

- Bibliofile
- OCLC
- RLIN

Electronic versions of cataloging rules and authorities such as LC's Cataloger's Desktop can be searched directly without exiting Virtua. The F1 key takes the user directly to the online help system, which follows the text of LC's USMARC Concise Formats, searchable by hypertext "hot links."

Unique Data-Entry Templates

The design of Virtua adheres to the VTLS Inc. philosophy that each library is unique. To this end, Virtua includes powerful options for customizing the software to better support local work processes. The full MARC editor provides wrap-around text editing capabilities, variable size edit boxes, and a special display for bib-level and type fields. The MARC editor also supports preset work forms that contain fixed data that can be edited to suit local needs. Your library can define an unlimited number of original cataloging work forms for various record types and materials formats.

Work forms can also be designed for specialized needs, such as monographic series, metadata (such as Dublin Core) and institutional publications, enabling quick and uniform cataloging of new receipts. Multiple work forms can be kept open simultaneously, so that data can easily be "cut-and-pasted" between records.

The fixed field editor allows a formatted display of fixed field elements that can be individually edited. The layout and display in the editor change with each record format. Your library can choose to have certain users catalog with the MARC Editor and certain others catalog using the labeled editor. The labeled editor supports easy-to-edit layouts of MARC records for novice users of the MARC format. It maps the MARC record into a user-defined, label-based editor where each tag and sub field can have a separate label.

Data entry prompts, field descriptions, and context-sensitive help screens can all be customized by the library.

Unicode Standard

Virtua's cataloging system supports the character repertoire of the Unicode(TM) standard or any single Windows-based code page. The client comes with a translator, which converts copied or imported records in standard Windows character sets to Unicode. Extensions are available to import the full ALA character set and automatically translate it into Unicode prior to storage.

The Unicode standard supports many characters. The keyboard, on the other hand, is limited to a single language. In order to facilitate the editing of records containing words

and characters from multiple languages the software allows for easy switching of keyboards. A virtual keyboard can also be displayed if required.

Built for the Cataloging Workflow

After creating or editing records with the label editors, newly created or modified records can be held until reviewed and approved by a senior cataloger, after which they are added to the permanent database. A bulk record display allows the cataloger to view all records in a file and select some or all of them to edit or save directly to the database. Alternatively, new cataloging copy can be saved to a hard or floppy disk file. These saved files can be uploaded to the server at a later time through a batch job process.

Validation of Cataloging Copy

Since accurate data input is so critical to the proper functioning of the library catalog, Virtua includes a comprehensive rules-based validation subsystem that allows the validation of content designation for any type of record stored in MARC format. The system offers rules for validating record types including:

- Bibliographic
- Authority
- Holdings
- Community Information

More than 3,000 rules have been written for bibliographic records alone. Users can also create and modify their own validation files.

A Completely Integrated System

Like all of Virtua's subsystems, the Cataloging module is fully integrated with all other system functions. Catalogers will particularly make use of the Virtua OPAC to take advantage of its advanced searching features. This is very convenient for retrieving records for editing, verifying authorized forms of headings, and merging records and headings. The Virtua OPAC interface can also be used to search remote library databases that support the Z39.50 protocol, as well as locally mounted secondary databases and selected online database vendors and CD-ROMs (see above). Virtua's security permissions matrix controls which parts of the system individual users have access to, but in all cases moving between functions and subsystems is simply a matter of a few simple keyboard commands or mouse clicks.

Support for Standards

Virtua supports all industry standard record formats, character sets, and classification schemes. The system can accommodate all MARC21 bibliographic formats (Serials, Music, Maps, Mixed materials, Books, Visual materials and computer files. In addition, Virtua accommodates many versions of the MARC standard including, USMARC,

UKMARC, CANMARC, CATMARC, SWEMARC and many others. Virtua conforms to the MARC21 Formats for Authority Data, Community Information, and Holdings Data. Virtua also imports, stores, and exports the complete MARC record without any data loss.

Intelligent Authority Control

Virtua allows your library to manage complex authority data with ease. Catalogers can browse all existing headings with the powerful searching features of the Virtua OPAC. Authority files external to your main bibliographic database can also be maintained, whether on tape, CD-ROM, or loaded as a secondary Virtua database. You can select products from a wide variety of authority data vendors, such as the Library of Congress. As new cataloging records are created, Virtua can check the contents of all MARC tags that are under authority control against the bibliographic database and against these external authority files. Headings that fail this authentication procedure can be merged with other authorized headings, edited locally by the cataloger, discarded, or approved for addition to the database "as is."

A System for Today's Libraries

VTLS Inc. is a leader in helping libraries move into the emerging multimedia information environment, and was the first library automation vendor to provide full multimedia support in our products. Virtua optimizes access to sound, text, and graphic image and video files, as well as Internet sites of all types (web pages, gopher servers, FTP servers, etc.) through the 856 MARC field. This allows cataloging staff to integrate the riches of the local library database with network-accessible information resources around the world, truly creating a virtual library.

Powerful Security Features

Virtua emphasizes sophisticated user access controls, including security by individual users, user groups, and library locations. The ability to make modifications to all types of records and system settings is controlled by a security permissions matrix, which filters screen displays and menu options. The available security features are so comprehensive that it is even possible to restrict which system users have the authority to edit individual MARC tags.

Chameleon Web Gateway. VTLS has turned the programming of the Virtua Web Gateway inside out to empower your library with the flexibility needed to design and create a custom-made display interface of your own. With the newly named Chameleon Gateway, libraries are no longer limited to a default design and a few configurable buttons. The entire face of the software can be changed to reflect the collections and image of the organization.

Flexible Interface

The Chameleon Gateway is a product that libraries can use to effectively meet the needs of diverse patron groups. Users can access the library catalog from their offices, schools, libraries, and homes. Navigation of library resources is made easy through user-friendly and intuitive screens. Features of the Chameleon Gateway include: a library customizable interface; multiple search options; multimedia access; security; easy to read cross-references and access to library catalogs worldwide. The Chameleon Gateway also features a cart where users may save records or search results for later viewing, printing, or emailing.

The Chameleon Gateway's use of "skin" technology allows the individual library to offer a variety of customized interfaces and allows the end users to choose the one that best meets their individual needs . Experienced researchers and "Power Users" could choose an "academic" oriented interface, while children might search the catalog through a specially designed "child-friendly interface". By creating or modifying a skin, the library can make the Gateway match the appearance of the library's web site, provide targeted Web sites for particular segments of patrons (children, visually mpaired, etc.), and grant or deny access to selected Gateway features. Every library can build its own personalized web portal. Options are available to customize the logo and title of the gateway on the Splash screen; customize the background color; add graphics; customize the text of the buttons and labels; limit the catalogs viewed by patrons; and change the language in which the library catalog is viewed.

Multimedia

The VTLS Chameleon Gateway is a Web OPAC designed specifically with image collections in mind. The Chameleon Gateway is based on a series of innovative system architectures chosen for their emphasis on ease of use, natural workflow processes, adherence to industry standards, and ready exploitation of the speed and sophistication of graphical user interface (GUI) workstation environments.

VTLS Inc. has designed the Chameleon Gateway to meet the present and future demands of multimedia information access through the Internet and its growing use by library patrons. Any user who has a connection to the Internet and an appropriate WWW browser can search your image collections as well as other Z39.50 compliant databases. Ideal for research-based universities, historical societies, museums and community-focused libraries, the Chameleon Gateway redefines library access.

The Chameleon Gateway easily integrates multimedia into the OPAC. Through a direct link from the bibliographic record to the multimedia file, a patron can easily see photos, maps, documents, abstracts, art prints, manuscripts and even hear and see sound and video clips. The multimedia files can be stored on a workstation, server, or anywhere on the Internet. This linking feature makes it easy to integrate the access of multimedia from any source into your library's resources.

Accessibility

The Chameleon Gateway works well within today's information rich environment and makes searching your library's digital collections fun, easy and accessible to virtually anyone. Moreover, since the Chameleon Gateway is Z39.50 compliant, you can also give your users access to other databases using the familiar and easy-to-use VTLS interface.

Ease of Use

The Chameleon Gateway allows you to provide access to your collections through a windowed environment using World Wide Web conventions that are familiar to web-surfers. Navigation of your library's resources is easy through user-friendly and intuitive screens. No instruction on using the browser is necessary, making it an ideal access point outside the library or campus. Because all screens can be configured to your organizations liking, you historical footnotes or whatever you feel would assist the user in navigating the material.

Multiple Language Support

The Chameleon Gateway is built for international use allowing users to change the language of the interface for searching. By clicking an alternate language on the web page, all buttons, prompts and search facilitating windows are changed to the selected language. There are currently 8 language translations available with more on the way. Sites also have the ability to create their own language. This is especially useful if an organization uses unique industry terminology and users are more familiar with those terms than standard library search strategies.

Searching

The Chameleon Gateway accommodates a variety of search strategies, from simple keyword and browse searches to complex Boolean and word combination searches. This flexible format makes it easy for your library to accommodate users with varying degrees of computer research skills.

Selective Dissemination of Information (VSDI).

Virtua SDI sets a new standard for SDI capabilities. Using a Web interface accessible through the Chameleon Web Gateway, users can save searches to their patron record and select SDI options that Inc.lude on-demand execution of their profile with results displayed on the screen, or automated execution of the profile with results sent via e-mail. And because this is Virtua, the SDI profiles can be directed against different databases, Inc.luding external Z39.50-compliant databases. Virtua SDI will be available beginning with release 35.

Circulation. Virtua is designed with the Circulation Desk in mind, optimizing workflow flexibility.

Matrices

The system uses matrices to circulate the holdings of your library. These matrices are made up of parameters (set by your library) that define patron-, item-, and location-specific information. Options for patron views and patron circulation privileges give your library the flexibility to customize the software to your operational environment. The Circulation system automatically checks these parameters for each circulation transaction allowing you to provide prompt and accurate help to patrons.

Functionality Made Easy

With Virtua's Circulation system your workflow is easy to follow. A click of the mouse, a combination of keystrokes, or the use of "hot keys" will take you to the beginning of any circulation workflow process. "Wizards" for staff and user-initiated services make transactions even easier to follow. Using any of these methods, the staff can then quickly:

- Check out/check in books
- Print checkout receipts
- Renew materials
- Add/edit patron records
- Add/collect fines/fees
- Place a hold/request
- Dispute transactions
- Waive transactions
- Search the OPAC
- View the audit trail
- View patron records
- View the transaction log

Checkouts, Check-ins and Renewals

The Virtua checkout function uses due dates based on the patron + item class + location parameters matrix. Librarians may override the system-defined due dates by manually entering a new due date or by setting a fixed due date. Transactions are executed in real time and library staff can view the patron information directly from the item record. Patron self-checkout workstations such as 3M and user-initiated transactions are also supported. Currently, Virtua supports version 1.0 of the 3M protocol including renewals and magnetic media. Before Virtua discharges an item at check-in, it checks the item to:

- Verify that it has been checked out
- Compute any overdue fines.
- Post overdue fines to the patron fines record.

• Assign the appropriate status to the item record.

The operator is also alerted both audibly and visually by the system if the item has a status of anything other than available.

Staff and/or patrons can place renewals.

You can renew on an individual item, selected items, or all items checked out to a patron. Renewals may take place in real time or batch and are governed by the same circulation checks/parameters as the checkout activity. Your library determines the renewal limits at the patron, item class and location levels. The system does not allow renewals for items with outstanding hold, recall or loan requests or for items that have already been renewed to library-specified renewal limits. Confirmation letters are generated with batch renewals.

Holds, Recalls, Loans and Pages Requests

Virtua processes four types of requests, hold, recall, loan, or page (HRLP). The request type can be manually assigned by the library staff or automatically determined by the system. The system's classification is based on a number of library-defined parameters, the item's location and status, and the patron type. Virtua gives your library the flexibility to use system-designated requests for certain user types and gives your staff the option of choosing the request when necessary. This built-in flexibility means that your library can determine which of the request types is available to different user types, which users may specify these requests, and which users accept the system request. Patrons, if given the permission, may view their position in the queue for the item via the Pending category on their Activity Window. The library staff can view and manage the request queue for a bibliographic record or for a specific item. When items that are flagged for holds, recalls, and loans are returned, Virtua automatically generates letters to be sent to the items' next recipients.

Disputed Returns

Any item may be placed into a disputed category. This is done by highlighting the line item and then clicking the dispute button. The software automatically moves the item from its current category to the disputed category. This "disputed" status suspends all fine calculations and removes the item from threshold calculations for circulation blocks. However, the link between the patron and the item remains, allowing the situation to be resolved to the satisfaction of library policy. Fines attached to a disputed item are no longer added into a patron's total fines, but are reserved until the dispute is resolved. When the dispute is resolved, the fines are either waived or recalculated from the beginning of the fine period and then charged to the patron's record. A record of fines and/or charged items that have been waived can also be maintained for tracing purposes.

Grace/Amnesty Periods

Your library can specify a grace period for overdue items in the system parameters. The system configures the grace period using a patron + location matrix. Fines are not charged for items returned during the grace period. Fines can be computed from the due date or from the end of the grace period according to your library's policies. Your library can also set an amnesty period allowing your users to return overdue books in a defined time-period without being fined.

Patron Information

Virtua maintains four levels of patron information. The card tab provides a card-like view of the patron registration record. The elements of the Card view are defined by the library. The MARC tab provides the full patron registration record in MARC format. The Activity tab shows all categories of activity, such as checked out, requested, pending, available and disputed. The Account tab shows all financial information relating to the patron. All information in the patron record is secure and only authorized staff and, if the library desires, the patron, have access to the information in the patron record. The library can also choose what tabs on the patron record are viewed by the patron.

User Initiated/Self Service Transactions

Virtua supports user-initiated services. At the library's discretion, patrons can access their accounts with the use of a user name and password. They can see the items checked-out to them, view their position in the hold queue, cancel a hold request as well as see the financial records associated with their accounts. Patrons may also be given the privilege to renew an item or items, place a hold and update their address.

Patron Fines

Virtua keeps track of fines due on overdue items based on policies set by your library. For maximum flexibility, your library can set different fine rates based on the item, location and patron type. The system also allows fees for services such as photocopying to be added manually to a patron's record. Virtua will accept a full payment, partial payment, and the deletion of patron fines and fees. Fines may only be deleted or waived by an authorized individual. Virtua automatically blocks patrons from circulation privileges when their charges exceed a library-specified amount.

Transaction Log and Audit Trail

A right click from the Activity tab or from the Account tab gives you access to the transaction log or to the audit trail respectively. The transaction log displays circulation statistics for a patron, for a patron plus an item, or for an item only. Your library determines the time period of the transaction history to display and to archive in the system. The audit trail displays statistics for the financial information related to a patron. Again, your library chooses the time period of the financial history to display and to

archive. Both the Transactions Log and Audit Trail are parameterized and can be turned off.

System Alerts and Blocks

Virtua utilizes visual and audible alerts, and blocks for delinquent patrons. Alerts inform the operator of account statutes such as a patron's existing fines, overdues, and filled requests. Alerts do not block a patron's circulation privileges, but do require operator acknowledgment. Virtua also has system blocks that suspend circulation privileges when the library-defined thresholds are reached. System blocks are not easily removed.

Circulation "on the Fly"

Items that have not yet been barcoded can be checked out quickly and efficiently using Virtua. The process for adding items "on-the fly" is simple and can be accomplished by non-catalogers. The Circulation staff simply click the "circ-on-the-fly" line from the transaction menu in the Circulation subsystem and the MARC Editor displays the "circ-on-the-fly" work form. This work form includes only those MARC fields that the library defines as necessary for these records. In fact, your library may choose to use the Labeled Editor that displays tag labels rather than just tag numbers. For instance, Author's Last Name, First Name, and Title, will appear in each field to make data insertion more intuitive for your staff. Librarians may also create validation rules to ensure that the "circ-on-the-fly" record contains a specified set of tags.

Circulation Control Reports

Virtua generates a series of four notices to handle overdue materials. Your library may send one review notice x number of days before the items are due. A specified number of notices regarding overdue items can be sent prior to a bill being issued containing the price of the book and a processing fee. An account statement can be sent to the patron if the item is not returned in the library-specified number of days. In addition, there are pre-overdue search lists your library can use to search the stacks for material before notices are sent to the patrons. Other notices available include, fine letters and request availability notices.

Circulation Backup

The circulation backup system lets you continue automated circulation at times when the main system is unavailable. Circulation backup has the same interface as the Virtua Client and allows you to checkout, check in, renew, accept fine payments and create patron records. Later when the main system becomes available, you can upload the information recorded by the backup system to the server and load the transaction data into the Virtua Database.

Reserve Lists

Virtua allows you to create and maintain course reserve lists and monitor the circulation of items associated with those lists. Users are able to search for reserve lists by course number and instructor name. Virtua gives the option for your library to archive a reserve list or reserve item once the active period has expired. This allows the library to quickly re-activate the list or item when the professor puts it on reserve again at a later date.

Online Public Access Catalog. Virtua's Online Public Access Catalog (OPAC) provides the end-user with an efficient, easy, and quick way to access your library's catalog. The OPAC achieves this through powerful server functionality and its intuitive client interface. Features of the OPAC include:

- Library configurable interface
- Multiple search options
- Easy to read cross-references
- Multimedia access
- Patron Empowerment
- Sorting
- Access to library catalogs worldwide
- Inherent Unicode support
- Security

Library Configurable Interface

Your library configures the interface! Through Virtua's permissions and parameters matrix, Virtua is able to offer your library many display options for the OPAC—bibliographic information displayed on the card screen, bibliographic information displayed on the List of Titles screen, tabs that are viewable by a particular patron type, plus many more!

Multiple Search Options

Virtua offers four types of searches:

- Browse
- Keyword
- Control Number
- Expert.

Virtua's Browse search option allows users to explore a list of indices chosen by your library. The Browse search produces an alphabetical list of the index chosen by user, and it allows the user to easily navigate through the list—next/previous page, skip "x"

number of entries forward or backward in the list. Right truncation is implied, so even a misspelling will place the user in the alphabetical listing.

The Keyword search option gives the users the power to incorporate, singly or in combination, the use of Boolean operators, left, right, and middle wildcard truncation.

Control number searching is designed for staff use. It returns records based upon numbers such as ISSN, ISBN, OCLC, LCCN, Item ID, and Bib ID.
Expert searches allow the user to construct search strings while incorporating the use of Boolean operators, left, right, and middle truncation, and proximity searching.

To further refine search results, users can employ the use of filters in Keyword and Expert searches. The user can filter on categories such as location, format, nature of contents, language, place of publication, and year of publication (date range). Virtua also offers users the convenience of printing, saving, or emailing records.

Easy to Read Cross References

Reading cross-references has never been as simple as it is with Virtua. Immediately, the user can identify "see" and "see also" references. Users can view referenced terms and authority records. Virtua also will tell the user whether the terms referenced are Broader, Narrower, Earlier, Later, Acronym, or Musical compositions.

Multimedia Access

Web pages, sound clips, and other external files are all accessible at the click of a button! Virtua opens up a whole new world of access with regards to multimedia. Multimedia is linked through the 856 tag of the MARC record and can be displayed with the appropriate viewer. A user can immediately access these objects regardless of their location or format, by simply clicking on a highlighted link that is located on the various tabs of the View Record screen of the bibliographic record.

Sorting

Virtua will sort by the default the library chooses, but will also allow the user to resort his search results. To sort result sets, users simply specify their sort option by clicking on the Sort button. Result sets can be sorted in ascending or descending order by author, title, call number, and publication date with a sub-sort of author or title.

Patron Empowerment

Virtua's patron empowerment features help free-up your staff's time while giving your users special privileges to:

- Place their own requests
- View the status of their requests
- View their place in the request queue

- View their own patron record
- View their current activity
- Review their financial (fines/fees) information
- Initiate document delivery and ILL requests
- Renew materials independently

Your library may also choose to use self–circulation workstations, which enables patrons to check in and check out materials as permitted by your library.

Access to Catalogs Worldwide

Search your library's catalog and catalogs worldwide! Virtua's support of the Z39.50 (version 3) standard enables your users to search Z39.50 compliant library catalogs/databases such as IAC, SilverPlatter, and UMI. Users access these library-defined databases from a pull-down list box that is constructed and configured by your library. By opening multiple sessions, users can search and compare result sets from various databases.

Multilingual Support

With Virtua's OPAC, your users can search, retrieve, and display records that contain data in over 100 different languages. Currently, Virtua's Unicode implementation can support all languages based on the legacy scripts of Latin 1, Latin 2, Cyrillic, Greek, Arabic, Hebrew, Turkish, Japanese, Traditional and Simplified Chinese, Vietnamese, and Korean.

In addition to Virtua's multilingual support for storage, display, and input, users can dynamically change the Virtua interface language, the system dialog and Virtua's help facilities without impacting anyone else in the system and without leaving his current session. So, now if your patron speaks German or Chinese, he simply changes the language display option (See Virtua's Unicode Fact Sheet for more details).

Security

Because security of your data and your system is important, Virtua employs a sophisticated security- permissions parameters matrix that allows and denies access to individual users. Each user can be given a user profile that defines a user's access, screen displays, and empowerment capabilities. Login Ids and passwords can be required and are used by the system to authenticate users' privileges within the system. These privileges can also be assigned to users within a group. The number of groups that can be established is unlimited.

Serials Control.

Workflow Sophistication and Simplicity

Virtua's GUI provides an intuitive, familiar work environment by using tabs, floating menus, and many additional access points which allow for quick travel through the database.

The serials librarian is able to enter the work process at any point using the client toolbar and can remain in a single procedure, while bringing up additional windows to perform other functions. For example, from the check-in screen, a serials librarian can immediately conduct an OPAC search and view prediction patterns, policy notes, the bibliographic record, and the holdings record for that serial.

The GUI allows you to execute one process from many different locations within the client. Claiming, for example, can take place from the purchase order screen or the serials check-in screen. Virtua allows claiming from the holdings record of an OPAC search. And, because Virtua incorporates the EDIFACT Standards for Electronic Data Transfer, you can immediately queue a claim for electronic transmission saving you valuable time. If your vendor prefers printed claim letters, Virtua will create them for you. You may also opt for both options, if you still need a paper copy for your files.

Right click functionality can be found throughout the Serials subsystem. For instance from the serials check-in screen, users can update holdings records, add or modify issues, view and manipulate serials routing lists and access many other features.

Subscription Management

One of the more complex serials control processes—the recording of serials publication patterns in the MARC holdings record—is made easy with Virtua's intuitive processes.

From the simplest to the most irregular serial publication pattern, Virtua allows you to create and save patterns unique to the subscriptions your library receives. This coding and the creation of the holdings record can be completed at the point of order or when the first issue is received. Once a pattern has been entered, future issues are automatically predicted and you may copy this pattern to other subscriptions with the same cycle. In many systems, the modification of a pattern for special issues poses difficulties. In Virtua, you can modify alternative enumeration or chronology, add a special issue, modify a special issue or delete one or multiple issues. The prediction pattern screen also allows for the coding of omissions and combined issues. If a serial is a monthly publication except for two months of the year, for example, you can use the calendar to specifically designate the months that are exceptions.

Renewals, Reminds and Routing

Because the workflows of Acquisitions and Serials often interact, Virtua seamlessly integrates the data flow between the two subsystems. This integration includes ordering, tracking, renewing, and paying for periodical and monographic (standing order) serials.

By simply selecting the order type of the line item as Subscription, Renewal of Subscription, or Membership, you can edit and save information on the Order Line Editor window about the subscription dates. These dates can be changed using an easy pop up calendar. By saving the beginning and ending dates with the order for a subscription, the system automatically creates a serials reminder and the renewal date will be used to determine when the subscription expires.

Virtua creates reminders for overdue issues and automatically deletes them when the issues are checked-in. Reminders are automatically removed when the issue is claimed.

After check-in you may wish to route the subscription using the serials routing feature. This feature allows you to view the holdings routing list window where you can view, add or delete patron names or move patrons up and down in the routing priority list.
Bindery Features

The Virtua Bindery subsystem will be a feature of a future release of the system. Virtua's binding capabilities are being built into serials control with support of the Z39.76 standard. Binding is predicted automatically when a serial is checked in and is based on the frequency specified in the 853 tag and the locally defined bindery tags. Virtua will also automatically notify you when the adequate number of issues for binding has been received. You can create vendor records for binders, as well as manage account information at the time of check-in of binding items based on information in the holdings MARC record. Full screen editing is available for the binder's notice with strict user permission to control editing.

Advanced Functionality with Ease of Use

Also of importance is the level of functionality Virtua supports. While the serials control subsystem is sophisticated, it is simple to use because of the GUI and elegant workflow processes. Instead of fighting through complicated procedures, you can direct this subsystem to perform much of the work, giving you time for other activities. For instance, if your library has multiple subscriptions of a serial, but only circulates two of these subscriptions, your patrons can view from the View Holdings Record which items circulate. Creating an item record is simplified also. Many of the fields in the item information screen are automatically populated from default values allowing you to simply fill in other fields such as the barcode information. Coming soon to Virtua is the automatic creation of an item record at check-in.

To track serials control activities, Virtua provides a comprehensive set of reports that inform you of the status of expected issues, subscriptions, acquisitions, and bindery activities.

Integration with Other Subsystems

The serials control system is tightly integrated with other Virtua functions, allowing quick movement between functions in different but related subsystems. This eliminates time-consuming efforts to find information in other areas of the database. This focus on intuitive cooperation between functions provides a seamless transition for the serials control librarian.

Acquisitions and Fund Accounting.

Workflow Simplicity and Adaptability

Virtua's graphical user interface provides an intuitive, familiar work environment with the use of tabs, floating menus and many additional access points, allowing quick travel through the database. Virtua's flexible design supports a variety of workflows. It accommodates repetitive workflows as well as integrated workflows where you can move from creating a purchase order to receiving to invoicing to paying without reentering any information. If your library is set up to assign a staff member to perform only one step repeatedly in the acquisitions workflow, you will appreciate Virtua's support of repetitive workflows for purchase orders, receipts, invoices and payments.

Account Structure

Virtua's account structure is truly flexible, imposing no limits on the levels of accounts or the number of accounts allowed. Individual libraries or locations can maintain separate and mutually exclusive fund account hierarchies with single or multiple tier accounts. You can even open multiple fiscal years at the same time. Virtua also accommodates deposit accounts and issues a prompt to replenish funds when the minimum balance that your library has determined is reached. Accounts can be set up to accommodate different currencies, while a foreign currency exchange rate table simplifies the conversion process for accounting processes.

Vendors and Orders

Virtua has simplified the creation of order records. You can add items to the orders by simply dragging and dropping items from your own catalog. If you need to retrieve the records externally, you can search sources such as OCLC, Books in Print, and CD-ROM databases, download their cataloging records, and then save them to your database. If you want to create a new bibliographic record (standing orders, monographic sets, and/or planned orders do not require a bibliographic record prior to ordering.), the click of a

button takes you to the full-screen editor in cataloging for the immediate input of brief bibliographic information. You can then simply drag and drop records from your own catalog to the purchase order.

Virtua Flexibility

Virtua is flexible and adapts to your priorities. For example, Virtua allows you to customize many areas of acquisitions such as:

- Purchase order id numbers
- Claim letters
- Purchase order forms
- Status
- User permissions
- Over-expenditure
- Taxes and postal charges
- Over-encumbrance levels per fund account

Vendor records, stored in a 2709 format, are also adaptable, giving your library the capability to define the record content with an unlimited number of fields. A specific default vendor with default due dates can be assigned to each staff member, while a full-screen editor is available for the creation and modification of vendor records. To make ordering even easier, orders can be standard or prepaid. To expedite ordering, Virtua accommodates a variety of purchase order types that require different workflow processes, such as approval plans, blanket orders, and gift items. For example, if the order is a blanket order or an approval plan order, or if you want to receive the order automatically upon saving, you simply select the radio button, "Immediately Proceed to Receipts" on the Update Order window. Then click the Save button and the Receipts window appears.

Virtua also gives you flexibility. You may have an unlimited number of line items on a purchase order, copy a purchase order, and assign special statuses to purchase orders. And any order, even for a single item, can be charged to multiple accounts. For instance, Virtua provides a Copy purchase order function if you wish to resubmit to a vendor a cancelled order or order the same items from another vendor if your regular vendor does not have the items. Virtua also integrates your library's data. When a purchase order process is begun, fields from the vendor record automatically populate the header of the purchase order. In addition, the software also pulls the appropriate bibliographic fields for line items on the order record so that the user may look at detailed information regarding the line item.

Receiving and Invoicing

Receiving just got easier for you. Virtua's Express Receive allows you to select and receive any number of line items or all line items on a purchase order at once. You can even receive multiple copies of an item, even if each has a different status such as "good

condition," "damaged," or "duplicate." Items can also be added to the "new books" or "acquisitions" list from the receipt screen. A history screen is part of the receipt window. It shows you the receipt status for each line item on a purchase order. Virtua's invoicing steps take full advantage of the vendor record format created by VTLS Inc. All invoices are linked to a vendor and purchase order record. When creating the original invoice, users simply call up the vendor and type in the invoice and purchase order number, and all relevant information is accurately displayed from the purchase order. You then have the choice of paying for only certain line items or the entire invoice. Any line items not paid are archived and remain part of the invoice. Users may also choose to pay all invoices from a vendor. An expanded view of any line item shows all charges or credits placed against the line item. You may edit these figures from the expanded view and then resave the line item to the invoice. The invoice and line item totals are automatically updated.

Accessibility to External Sources: Moving Toward a Paperless Office

As the trend toward creating paperless offices continues, we have designed Virtua to minimize the continuous flow of paper notices and reports moving in and out of your office. Virtua incorporates the EDIFACT Standard for Electronic Data Transfer, allowing the immediate electronic transmission of order, invoice, claim and payment records for monographs and serials. Libraries that need to continue to send faxes and print letters may do this in addition to sending the orders electronically. Your library may choose the format.

Advanced Functionality with Ease of Use

Also of importance is the level of functionality Virtua supports. While the acquisitions and fund accounting subsystem is sophisticated, it is also simple to use because of the GUI and elegant workflow processes. Instead of struggling with complicated procedures, you can direct this subsystem to perform much of the work, giving you time for other activities.

In the future, Virtua will automatically create holdings records for serials order types once the purchase order has been saved. Also, acquisition records will be masked from the OPAC with tag level masking available at the library's discretion as well as masking from individual users. Automatic claiming is also an option, or you can review reminders before issuing claims.

Because of the private information acquisitions and fund accounting contains, security is also significant. Virtua provides a sophisticated and secure solution with the use of a permissions matrix that designates the capabilities for all of the staff members using that subsystem. Your library defines the permissions assigned to each user, allowing you to determine what screens and records any individual can access and/or modify.

To track acquisitions and fund accounting activities, Virtua provides a comprehensive set of reports that inform you of the status of subscriptions, orders, claims, receipts, invoices,

payments, fund accounts, and vendors. Performance statistics can be viewed online and are updated automatically. In addition, with Virtua's built-in report writer, you can generate an unlimited number of library-definable reports in customized formats.

Integration with Other Subsystems

Because many of the acquisitions and fund accounting functions are tightly integrated with serials control activities, Virtua combines the two subsystems into one tool bar. You can perform all activities related to the acquisition of serials without having to engage another subsystem. The acquisitions and fund accounting subsystem is also tightly integrated with other Virtua functions, allowing quick movement between functions in different but related subsystems. This eliminates time-consuming efforts to find information in other areas of the database. For example, you can immediately initiate an OPAC search from most acquisition screens. From the OPAC client, you can execute acquisitions searches on vendor name and id and in the future on purchase order id, order type, order date (range), requester, and status. This focus on intuitive cooperation between functions provides a seamless transition for the acquisitions and fund accounting librarian.

Reserve Room. The Virtua Reserve system provides a fully functional system, allowing the creation of multiple reserve locations, and the ability for library staff to enter, maintain, delete, and renew course reserve lists. All types of material can be added in the Reserves subsystem, and items can be placed on more than one active reserve list for multiple courses.

Tight Integration with Circulation

Virtua's Reserve system is tightly integrated with the Circulation system, allowing the user to process reserve lists without leaving Circulation.

Reserve Parameters

The library can also limit the circulation of reserved items through the use of separate reserve permissions and can register each item in a course with a different beginning and expiration date. Reserve parameters include:

- Requests.
- Blocking patrons.
- Renewals by location or item type.
- Override of loan periods.
- Restrictions on holds.
- Production of overdue and lost notices.

Permissions for reserve activities are granted to users according to their log-on ID. These permissions given by the library determine the specific functions that will be accessible to a given user. For instance, the ability to search for reserve items is allowed or disallowed for a given user in the same search interface. Reserve items can also be checked out or checked in using the same interface as non-reserve items.

Course Reserve Lists

The course reserve list, viewable from the OPAC, is searchable by instructor and course name and/or number. The subsequent list contains the name and number of the course, the name of the instructor, call number, title, and status of the item. From this list the user can also view all item level information including the expiration date of item for the course reserves, beginning date of course reserves, pull date, owning library, reserving library and other information pertinent to the item.

Multiple Locations

The Reserve system handles multiple reserve locations with varying schedules of opening hours, closing hours, loan periods, and loan privileges.

Fines and Due Dates

Fine rates for reserve items can be calculated differently than items in regular circulation. These fine rates can be either hourly or daily, allowing both an initial fine rate for a specified period of time, followed by subsequent fine rates.

As in circulation the reserves system produces date due slips and receipts, which shows the hour and minute of checkout and the date due.

Reactivation

Reactivation of archived course reserve lists is simple. After reactivation these lists can then be modified for subsequent semesters. For instance, items can be added or deleted as required by the professor. Individual items and/or all of the professor's courses can be reactivated at one time.

Reserve Reports

The Virtua Web Reports software can generate reports for the following:

- A listing of items on reserve at a specified location, sorted by professor, course, author, title, or call number.
- Pick lists of on-shelf items that are to be placed on reserve, by location.
- Lists of materials by professor including active and inactive items.
- Lists of materials that are overdue from a reserve location at a given moment.

- Suite of reserve management reports such as number of transactions per item, per course, and per location.

Inventory Control As your library's collection grows, you may find that controlling it has become more and more cumbersome. Through the use of RFID technology (see General Overview and Benefits of RFID Technology data sheet) your library can now handle multiple administrative activities that will give your staff more time to develop other services for your patrons. The following explains the administrative applications of RFID technology and how they can help you:

- Tag, identify and verify your collection.
- Manage the books on the shelf.
- Keep an accurate inventory of your collection.
- Deter theft of your collection.

Tagging and Verification

Entering the data on the smart label is made easy with the tagging and verification station. Paper-thin Gemplus smart labels are placed into new books at this station usually located in the library's technical services area. If there is an existing barcode label, it is scanned and the item number is then written onto the smart label. Alternatively, data can be keyed in from a keyboard connected to the tagging station.

Shelf Management and Inventory Control

Identifying books on shelves has long been a challenge for libraries. In most instances, it is something that has proved to take too much staff time and has been technically not possible or produced unreliable results.

The Library Shelf Management Reader has been designed specifically to make this task easy. Paper thin tags previously secured in books can be read within seconds and stored in the reader's flash memory that has a capacity of either 64,000 or 32,000 books depending upon the tag configuration. The reader has a battery charge life of four hours of continual use between charges making it easy and convenient to carry. The reader's arm, which contains an antenna, is extendable, and an adjustable strap allows the reader to be hung over the user's shoulder. An LED and an audible alarm provide feedback to indicate successful reads or other application specific requirements. In addition, a brush is attached to the surface of the antenna to protect books, and to increase efficiency of the operation.

The shelf management reader supports location of misshelved books, detection of missing books and the search for specific books. The reader updates the central database via an RS232 serial link to an administrative workstation.

Benefits of the VTLS Inc./Gemplus Shelf Management Reader

- Allows for more accurate inventory control of your collection.
- Can scan and read multiple books or single books on a shelf (including metal shelves).
- Identifies lost books and therefore improves service levels to customers.
- Increases staff productivity, freeing them to focus on customer service activities.
- Shelf scans can be taken quickly reducing the time it takes for inventory control and the identification of misplaced books.

Theft Deterrent System

The Theft Deterrent System is designed to maximize library security, using integrated RFID and EAS (Electronic Article Surveillance) technology. The EAS systems are used to protect your library's collections from theft. Here's how they work.

Installation and Operation of Theft Deterrent Gates

In the past, theft deterrence has been implemented through single bit magnetic and electromagnetic tags. The new generations of C220 Gemplus Smart Labels have the EAS capability built into the smart label itself.

Gemplus Theft Deterrent Gates are secured to the floor at each entry and exit point in the library. Smart labels attached to books are detected between the gates from six inches (150mm) above the floor, to almost 6.6 feet (2 meters) high. It is recommended that the gates be positioned 36 inches (900mm) apart.

At the time a book is checked out through either regular circulation methods or through the patron-self checkout station, the smart label's theft system is deactivated. If this process does not occur, an alarm will sound and the gate's lights will flash as the patron passes through with the book.

Gemplus Theft Deterrent is an integral feature of the chip within the smart label. It is a stand-alone technology that operates independently of the library database. This means the alarm will sound the instant a book not checked out properly passes through the gates, as there is no delay to reference the database.

Benefits of VTLS Inc./Gemplus Theft Deterrent Solution

- Only one technology is required for both inventory and theft management of your library's collection.
- Library staff is alerted immediately when books that are not checked out pass through the Theft Deterrent Gates.
- Would-be thieves are deterred by the physical presence of Theft Deterrent Gates.

Authority Control. See ***Cataloging***, above. Virtua allows your library to manage complex authority data with ease. Catalogers can browse all existing headings with the powerful searching features of the Virtua OPAC. Authority files external to your main bibliographic database can also be maintained, whether on tape, CD-ROM, or loaded as a secondary Virtua database. You can select products from a wide variety of authority data vendors, such as the Library of Congress. As new cataloging records are created, Virtua can check the contents of all MARC tags that are under authority control against the bibliographic database and against these external authority files. Headings that fail this authentication procedure can be merged with other authorized headings, edited locally by the cataloger, discarded, or approved for addition to the database "as is."

Status Monitoring. This subsystem provides default software-assigned statuses that are maintained by the system as library transactions are performed. You can then define *hundreds* of additional statuses and reporting schedules to enhance collection monitoring and provide current information to online catalog users.

RFID Technology. The radio frequency identification (RFID) solution offered by VTLS Inc. and Gemplus is based on Gemplus' smart labels. The solutions have an open architecture allowing them to be plugged into most library automation systems. Because of this open architecture any library regardless of their current automation system can implement the VTLS Inc./Gemplus systems.

What is Radio Frequency Identification?

Radio frequency identification (RFID) systems are rapidly replacing competing technologies in many applications. A basic RFID system consists of three components:

- An antenna or coil
- A reader
- An RFID tag or smart label that is electronically programmed with unique information.

A basic RFID system uses smart labels placed in books and various antennas to identify and manage your library's collection. The smart label in the book can be read and written to without contact or line of sight. You simply install the smart labels in your collection, and fast, accurate identification of your materials will be handled by your library automation system. Specific smart label reading/writing stations using a smart antenna are implemented at various key administrative process points within your library. These include:

- Patron self-checkout borrowing stations
- Tagging and Verification Stations

- Theft Deterrent Gates
- Book Drops
- Sorting Stations
- Inventory and Shelf Management Systems

Advantages of RFID over Barcode Systems

RFID applications enhance productivity and efficiency in libraries worldwide. Significant advantages of an RFID system include:

- The non-contact, non-line-of-sight nature of the technology. Tags can be read through a variety of substances and do not have to be oriented in any particular direction. This results in less handling and faster throughput.
- More than one RFID tag can be read at one time. Therefore, it is possible to scan multiple volumes simultaneously, when checking in or taking inventory.
- RFID has become indispensable for a wide range of automated data collection, identification and management applications that would not be possible otherwise. For your library this means using one technology source for the identification and management of your collection, as well as for theft deterrence.
- The read/write capability of an RFID system provides the ability to edit data, essential to interactive applications.

Benefits of the VTLS Inc./Gemplus Solution

- Two years of research within the context of a library.
- Utilizes a single technology for circulation management and theft deterrence.
- Significant research and development investment has been made and continues to be made to incorporate new applications for RFID technology in the library. Most recently these include tag design and shelf management systems.
- The investment in tags is by far the most significant cost of an RFID library management solution. VTLS Inc. offers the best capability to meet the required budget due to the extensive label manufacturing capacities of Gemplus.

Step-by-step Implementation of RFID Technology in Your Library

1. Prepare building for installation of Self-Return Book Drop.
2. Install Self-Return Book Drop.
3. Install Security Gates.
4. Install RFID antennas at circulation desk(s).
5. Setup technical services area for implementation of RFID.
6. Acquire smart labels and affix them to books.
7. Program tags at technical services area.
8. Install VTLS Inc. Self-Checkout workstation, ensuring your automation system is SIP 1 or SIP 2 compliant.
9. Train library staff in the use of the new system.

Statistics and Reporting. VTLS Inc. knows libraries need to rack and report statistics to sustain and advance their missions to serve the public. Nearly all activity in Virtua processing is tracked by means of transaction logging, and your library can assign statistics collection gathering to nearly all transactions in the system. You can even designate a set of activities you wish tracked for specific time periods and can limit the time period tracked. Some examples of statistical jobs that can be run include:

- Number of bib records, items, patrons
- Usage (password changes, browses, call number, location)
- Transaction activity for all searches by type
- Transactions (work form entry, edits, deletes)

Such collection is then subject to analysis by a report-writing module. The collection for each transaction type can take place continuously, can be scheduled, or it can be subject to being turned on or off dynamically. The raw statistics can then be downloaded to any other application or report-writing client that accepts delimited ASCII files

In Virtua recommended Oracle-based Ad Hoc report writers will generally make calculations using all standard mathematical operators and perform standard statistical analysis such as means, standard deviations, correlations, and variants based on all data submitted.

Statistical Display

Statistics are displayed in printed or compiled reports. Many queries result in immediate online status reports, and some statistical information is dynamically maintained. A good example of this is the item summary information in Circulation where usage information is compiled in statistical tables showing year-to-date circulations as well as total circulations for the life of the item. Statistics are updated in report formats, depending on the definitions for such reports.

Reporting

Using their word processor and a comma-delimited data file, a customer could obtain complete control over labels, formatting, and the location of repeating data. Customers could even drop unneeded record data from a report.

The new reports will produce tab-delimited instead of comma-delimited output. (The new overdues actually let you set the delimiter. The other reports do not.) All reports will produce HTML and regular e-mail output as well.

Parameters and Library Profiling. Virtua has more than 1,000 parameters offering you the flexibility to mold Virtua around your environment and policies rather than vice versa. Offering all the benefits of a graphical user interface running under Windows 95,

Windows NT, and Windows 2000, the Virtua System Profiling client lets you customize these parameters to suit your library's needs and purposes. It lets you perform these tasks efficiently because it uses SQL*Net to connect directly to the Oracle database rather than through the server. The Systems profiling client even makes the managing of multiple remote databases from any location easy. With the System Profiling client, you can

- Set up, view, and edit parameters for all Virtua subsystems;
- Set up user accounts and passwords for the Virtua system;
- Configure user profiles for the Virtua system that determine what does or does not appear to any given user;
- Configure Views of records that appear in the OPAC and Chameleon Web Gateway.

Furthermore, if you have more than one database, you can copy parameters from database to database and even save parameters offline to be imported later.

Profiling Library Operations

The system-profiling client is intuitive and well organized. It uses the Windows tab standard for dividing the various subsystem parameters. While this design allows for a good organization of the subsystem parameters templates, it also serves as a convenient method to allow controlled access to particular staff for only their specific subsystem parameters. For example, the head of acquisitions will want to view and/or set the parameters dealing with Acquisitions, but will not have to see the other parameters for other subsystems. The main window displays one to six tabs, depending on the functions your user permissions allow. Five tabs relate to specific subsystems (OPAC, Cataloging, Circulation, Acquisitions, Serials), and one tab (Global Settings) controls settings that control functions in both the Virtua client and System Client.

Configuring your system to your specifications involves setting up an elaborate system of interdependent data. This sharing of data helps eliminate many time-consuming and tedious processes: for example, setting views for each record type and for each screen within the OPAC. The backbone of the parameters structure is your library's global settings. These settings reflect the global parameters and permissions that all the Virtua subsystems will use in carrying out the operating policies you have chosen for your library.

The operating parameters found within the other five tabs take into consideration your operational processes for the public access, technical services and administrative areas of your library. Profiling a particular subsystem to actuate your policies is easily done through a hierarchical tree structure provided with the client. This structure uses templates that walk the user through the parameter setup process. In fact, many customers use the profiling client templates as their guide in determining the set of parameters that will define their systems.

User Profiling

Your library can also customize the system the staff and your users access. In the user profiles of the system-profiling client, you define which Virtua functions, actions, windows, and views your users or groups of users have permission to execute or access. In combination with the parameters, the user profiles let your library:

- Customize the system at the level of each user.
- Configure across subsystems.
- Provide a means of authentication and controlling security.

VTLS Inc. provides a default configuration for a library user consisting of three inter-related aspects that give a particular user access to your data. The user may be allocated to a group with a set of predefined permissions or assigned as an individual user with customized permissions.

Editing Templates

Within the system-profiling client you can use a pull down menu or use the right-click pop-up menu to access the editing functions. In addition, the client offers shortcut key combinations where you hold down the Ctrl key on your keyboard and press a letter key.

On-Line Help

As with all Virtua subsystems, you can call upon the online help when necessary.

Satisfied Customers

VTLS Inc. has heard and received many accolades for the design and setup of the system-profiling client. Every aspect of Virtua's dynamic functionality and who has access to this functionality is setup and controlled through the client. What is even more impressive is that all changes made to the system profile are instantaneous giving your users the immediate benefits of your enhancements. The system-profiling client is a tool all systems managers appreciate immediately.

1.12: Community Information Database

Community Information Databases work just like all other databases in Virtua. You create a separate database with community records that may contain links to whatever your patrons want: internet sites, information referral services, volunteer action notices, etc., you name it. And with the Chameleon Web Gateway you can make it look any way you want.

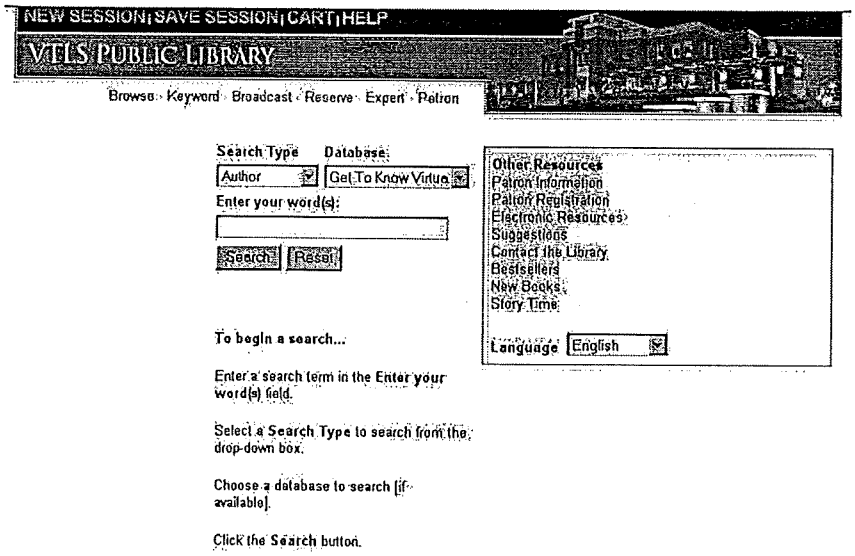
As its name suggests, the Chameleon Web Gateway can be configured to appear in many different forms. In addition to the ability to determine the availability and functionality of any Gateway feature, you have complete control over the *appearance* and *layout* of your Gateway. With even a rudimentary knowledge of HTML, you can create a customized theme or appearance for your Gateway that blends in with your library's Web page. A holiday motif, perhaps. Or a seasonal one. Whatever catches your fancy.

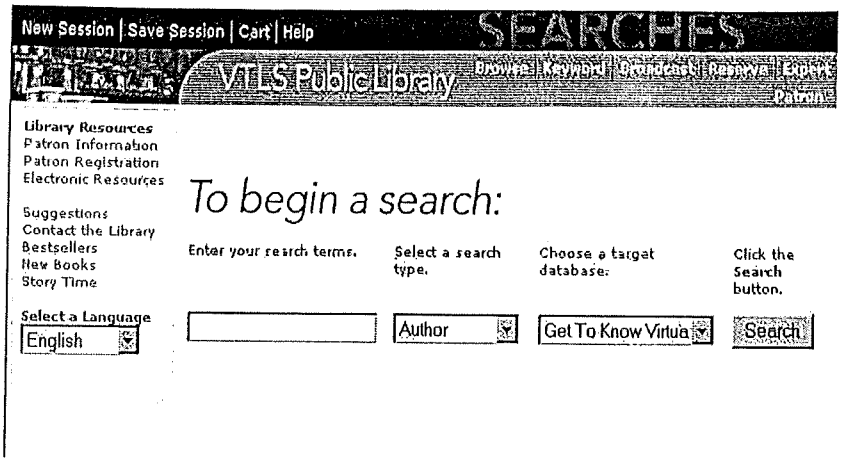
Depending on your level of expertise, you create interfaces as complex or as simple as you desire. Your interface can include advanced Web features such as frames, JavaScript, or style sheets. The only limit to your interface is your imagination and your Web design abilities. Even if you possess only a basic knowledge of HTML, you can modify the default interface provided with your installation, maintaining this custom interface or changing it as often as you desire

If desired, you can create multiple versions of your Gateway. By customizing multiple Chameleon Gateways, you can accommodate a wider range of patrons, providing support for all of the following requirements, and more:

- Multiple languages
- Various Web browsers, including text-based browsers such as Lynx
- Text readers for the sight-impaired

Additionally, you can create special Gateways to target a specific segment of patrons, such as children; or, if you have a database of items in a unique collection, you can create a version of the Chameleon Web Gateway with a theme or layout appropriate for that subject.





1.13: Self Check Systems, etc.

3M Patron SelfCheck

The VTLS Inc. 3M Patron SelfCheck Interface helps to automate your library system by performing repetitive and time-consuming tasks such as checking in and checking out materials. This innovation allows your staff to concentrate on providing more personal and complex services.

The 3M Patron SelfCheck Interface allows the 3M SelfCheck System to communicate directly with Virtua, automatically recording transactions as they are processed. In addition, the 3M SelfCheck Interface is highly flexible, giving you the ability to customize the system to meet your library's needs.

Radio Frequency Identification (RFID)

VTLS Inc., in conjunction with Gemplus, a world leader in smart card manufacturing, is providing cutting-edge library automation solutions through RFID technology. RFID (Radio Frequency Identification) applications are developed by VTLS Inc. to enhance productivity and efficiency in libraries worldwide. Borrowing, returning, sorting, inventory control, and theft detection are made easy with minimal handling and fast, accurate identification.

RFID Technology is rapidly being implemented to help libraries meet patron self-service demands. The VTLS/Gemplus RFID system uses Gemplus smart labels and a VTLS RFID interface to tag, identify and manage your collections. Administrative applications as described in the Collection Management through the use of RFID Technology include

the tagging, identifying and verifying of your collection, the management of the books on the shelf, inventory control and theft deterrence.

Patron Empowerment features of the VTLS/Gemplus RFID system include:

- Self-checkout stations for patron self checkouts of items.
- Self-service Book Drops for external returns of books.
- System identification of reserve items being returned.
- Sorting and verification station allowing for faster re-shelving of items.

VTLS Self-Checkout Station

The VTLS Self-Checkout Station allows patrons to borrow books without assistance from your staff and as a result greatly speeds up the checkout process within your library.

Self-Checkout Workflow

Self-service technology is familiar and indeed preferred by more and more library patrons. The VTLS Self-Checkout Station applies self-service technology to the book borrowing function. Patrons identify themselves using a card that can be based on magnetic, smart card or barcode technology. Libraries may also implement the option of a PIN (personal identification number) which can be entered manually.

After identifying their self, the patron simply follows the prompts on the screen and makes appropriate responses using the touch screen.

A book is placed on a library-identified area in front of the self-checkout station. The book's smart label is read by a smart reader and antenna that has been mounted underneath the tabletop. After the book is placed, the reader scans its smart label, your library's database is updated in real time associating the item with the patron, and the integrated theft deterrent system, incorporated in the smart label, is deactivated. A receipt is printed and issued to the patron confirming the borrowing transaction details.

The Self-Checkout Station is available as a complete system.

Benefits of the VTLS Inc./Gemplus Self-Checkout Station:

- No line of sight is required to read the smart label so there is no need for books to be opened or vertically aligned so that they can be identified.
- Improves patron service by reducing long lines, allowing librarians to help patrons who wish to know more about library services such as interlibrary loan.

- Updates the library's database in real time associating the item with the patron and showing the new status within the OPAC.
- Allows staff to develop existing services and new ones giving the library an opportunity to reach out to its respective community by offering services such as more story hours and quicker reference help.
- Improves library staff productivity by reducing the mundane tasks of checking out items, possibly improving morale.

VTLS Inc. Self –Return Book Drop

The VTLS Self-Return Book Drop allows loans to be cancelled instantly as patrons deposit books through an external book return chute. This enhances a patron's trip to the library since their record is updated in real time allowing them to checkout new books right away.

The VTLS RFID interface also updates the database and alerts the library when reserve items are returned giving prompter service to the individual requesting the item.

The Self-Return Book Drop is safe. Each book drop is designed with nine stainless steel deflectors that prevent liquids, matches and cigarettes from reaching the books. A free turning ball bearing steel roller at the end helps prevent items from jamming and eases books into an optional receiving cart. These safety precautions allow only books or magazines to proceed past the reader and the antenna to the book bin.

Packaged in a heavy-duty stainless steel fire deterrent chute, the book drop is ready to be installed in a library-specified location, facing an outside wall. The chute door opening is 15" x 4" and passes through an outside wall. A glass installation with a ten-inch wall kit is also available.

The VTLS Self-Return Book Drop is coupled with a Gemplus smart reader and antenna. The reader and antenna have the ability to read up to six smart labels simultaneously. However, library patrons should be encouraged to return books one at a time to ensure each one is read successfully. Books can pass through the chute at any speed and orientation to achieve a 100% successful read rate of all functional tags.

Verification and Sorting Station

The VTLS Verification and Sorting Station allows your library to get your collection to their appropriate shelves faster and ensures that all items have been checked in through the self-return book drop.

Workflow of Verification and Sorting Station

An entry-level clerk can do the manual verification and sorting of books. As books are pulled from the book drop bucket, clerks place them over the verification and sorting

station. The Verification System simultaneously checks the library's database to affirm the item status is available and reactivates the theft deterrent information on the smart label. In addition, the screen displays the status of the book and the appropriate sorting bin. The clerk simply drops the item in that bin for re-shelving. If the item is on reserve the clerk is notified and the book can then be immediately delivered to the circulation desk.

The automated sorting station is a highly customized option that automates the sorting process by running the books from the Self-Return Book Drop down a conveyor, through a pass that reads the smart label and then sorts the item according to a pre-defined category into that category's bin.

Benefits of the VTLS Self-Return Book Drop, Verification and Sorting Stations:

- Skilled staff is able to allocate more time to customer service as they are freed from checking in books.
- Patrons can borrow books immediately after returning their previous loans as the library database is updated in real time when books are deposited in the book drop.
- Items on reserve are trapped and a message is displayed to the staff alerting them that the item is on reserve.
- Items can be sorted based on a pre-defined category system such as Children's Literature or Best Sellers, or any category the library chooses allowing for faster shelving.

1.14: Reports

VTLS Inc. creates new reports on an ongoing basis, in response to our designers and in keeping with the needs of our customers. The following reports are currently available: Account Summaries, Acquisitions Audit Trail, Availability, Basic Circulation Statistics, Bills, Broad Cataloging Statistics, Cataloging Errors, Electronic Access Information, Items by Status, Items by Subject, New Books List, Order Status, Overdues, Recalls, Requested Bills, Requested Overdues, Titles on Order, Vouchers.

Statistics and Reporting

Virtua Statistics and Reporting lets you configure and generate Web-based reports for various subsystems. It is a flexible, user-friendly tool that helps you monitor and manage the activities of your library. Virtua Statistics and Reporting lets you configure reports to meet the specific needs of your library and save report configurations, so you can use them repeatedly. You can choose to generate tab-delimited output, E-mail report output

to patrons or yourself, or view report output in HTML format. In addition, you can schedule reports to run automatically and confirm that these have been run successfully.

Inventory Control

Collection of item barcode numbers from items in the stacks is largely a mechanical process managed by handheld scanning devices. The processing of this raw data and reporting of discrepancies between the collected data and the database involves the development of reports using the input files from the handheld devices. In addition to our continuing work on the Virtua side of inventory, we have also formed a partnership with Gemplus, allowing us to offer RFID technology solutions as an inventory option. With RFID technology, the inventory process is simplified as RFID labels can be scanned for inventory purposes without removing books from the shelf.

Custom Configurations

Currently, you can configure and generate Web reports for the Acquisitions, Circulation, and Cataloging subsystems of Virtua. A report configuration Template is included in the Virtua Statistics and Reporting software for each available report. In a future release, Web reports will be available for each Report Group.

1.15: Training

Flexibility

To meet the varying needs of libraries, we try to make the contents and scheduling of Virtua ILS training sessions as flexible as possible. VTLS Inc. training takes place at installation and continues as part of our ongoing customer service. There are several phases of VTLS Inc. training at installation. These phases allow training to be performed during consecutive weeks or at intervals to allow subsystems to be phased in according to your implementation plan. We consider your library's normal working hours in our schedule and allow for variations in travel arrangements for VTLS Inc. installation and training staff.

Certification

VTLS Inc. is committed to providing high quality training to its customers. To this end VTLS Inc. has developed a certification program to set standards for both VTLS Inc. staff and customers. Certification is offered in two areas, Virtua Applications and Systems Administration; and consists of a series of courses and exams at three levels; basic, advanced, and trainer. In order to ensure a superior training program and consistency between trainers, all VTLS Inc. librarians and technical analysts have successfully completed the same series of courses and exams offered to customers for certification and are certified at the Trainer level in either Virtua Applications or Virtua

Systems Administration. VTLS Inc. customers choosing to participate in the certification program will designate a site coordinator to administer exams and track certification for their staff.

Qualified Teachers

The customer services staff at VTLS Inc. responsible for training are highly qualified specialists in their fields. The training coordinator holds a Masters in Library and Information Studies, a PhD in Curriculum and Instruction, and is responsible for training design and the Virtua certification program. VTLS Inc. Customer Service Librarians hold MLS degrees or the equivalent, and/or have extensive experience working in libraries, and are VTLS Inc. certified trainers in Virtua Applications. Technical Analysts hold B.S. degrees in Computer Science or the equivalent, have extensive experience in the computer field, specifically in the areas of operating systems (UNIX), relational database management systems (Oracle), web administration and configuration, and are VTLS Inc. certified trainers in Virtua Systems Administration.

Curriculum

VTLS Inc. offers a comprehensive list of courses that provides the skills necessary to fully implement Virtua, as well as courses to teach the background knowledge that is necessary prior to taking the required courses. Please note that Pre-implementation and Implementation courses have variable lengths; this is to address special circumstances that may arise during the planning process. It is also possible to purchase additional days of training should training need to be repeated due to large numbers of staff, or in multiple locations.

List of Courses offered by VTLS Inc. (courses in italics are required):

CONSULTING VISITS

✓	*CV0100*	*1-X Days*	*Pre-Implementation Consulting*
✓	*CV0200*	*1-X Days*	*Implementation/Configuration Analysis*

LIBRARY THEORY AND PRACTICE

LT0101	1 Day	Searching the Online Catalog
LT0102	1 Day	Acquisitions and Fund Accounting
LT0103	1 Day	Cataloging
LT0104	1 Day	Serials Cataloging

VIRTUA APPLICATIONS

✓	*VA0101*	*0.5 Day*	*Intro to VIRTUA/Basic OPAC*
✓	*VA0102*	*1 Day*	*Circulation I*
✓	*VA0103*	*1 Day*	*Acquisitions I*
✓	*VA0104*	*1.5 Days*	*Cataloging I*

✓	*VA0105*	*1 Day*	*Serials*
	VA0106	2 Day	VIRTUA Basic Refresher
	VA0201	0.5 Day	VIRTUA OPAC II
	VA0202	1 Day	VIRTUA Circulation II
	VA0203	1 Day	VIRTUA Acquisitions II
	VA0204	1 Day	VIRTUA Cataloging II
	VA0205	1 Day	VIRTUA Serials II
	VA0206	2 Days	VIRTUA System Configuration

SYSTEMS ADMINISTRATION

	SA0101	2 days	UNIX I
	SA0102	2 Days	ORACLE I
	SA0103	2 Days	Web Server I
✓	*SA0104*	*2 Days*	*Virtua Systems I*
	SA0101	2 Days	UNIX II
	SA0102	2 Days	ORACLE II
	SA0103	2 Days	Web Server II
	SA0104	2 Days	Virtua Systems II

VIRTUA APPLICATIONS OR SYSTEMS (TRAINER)

TV0100	2 Days	VIRTUA Applications Trainer
TV0200	2 Days	VIRTUA Systems Trainer

A check ✓ denotes minimum requirements to implement VIRTUA and train staff in requisite functions, assuming some pre-requisite knowledge. Additional courses may be needed to address special needs or circumstances.

Pre-requisite Skills

Virtua Applications: Assumes working knowledge of MARC, online database searching, serials coding, and acquisitions account management in an online environment. Should the library staff require additional training in the pre-requisite areas, VTLS Inc. offers the following courses.

SEARCHING THE ONLINE CATALOG	1 Day	Lecture & Workshop
ACQUISITIONS & FUND ACCOUNTING	1 Day	Lecture & Workshop
CATALOGING, AACR2 & MARC	1 Day	Lecture & Workshop
SERIALS CATALOGING	1 Day	Lecture & Workshop

Systems Administration: Assumes working knowledge of Unix, Oracle database structure and SQL*Plus, web server management, HTML, basic Perl, Windows operating system. Should the library staff require additional training in the pre-requisite areas, VTLS Inc. offers the following courses.

UNIX I	2 Day	Lecture & Workshop
ORACLE I	2 Day	Lecture & Workshop
WEB ADMINISTRATION I	2 Day	Lecture & Workshop

✳EXECUTIVE TRAINING

CV0101 PROJECT PRE-IMPLEMENTATION CONSULTING

Duration: One-day planning & workshop; may vary according to needs
Audience: Project Manager(s), administration, directors, and department heads
Pre-Requisites: None
Certification: None

Course Description:

Intended to initiate a project, this consulting visit is usually performed by a VTLS Inc. Project Manager or Support Librarian working with the site's project manager(s), administration, directors and department heads (i.e. policy makers). Participants and agenda determined by customer and VTLS Inc. Project Manager. May be delivered remotely

- Welcome package & questionnaire
- Review of data conversion issues
- Introduction to basic configuration concepts, as necessary:
  - Client/server/gateway concepts;
  - Structure & relationship of record types in the database;
  - Definition of item, location, & patron classes

✳OPERATIONS TRAINING

CV0102 PROJECT IMPLEMENTATION/CONFIGURATION ANALYSIS

Duration: Two-day planning & workshop; may vary according to needs
Audience: Project Manager(s), administration, directors, and department heads
Pre-Requisites: CV0101: PRE-IMPLEMENTATION CONSULTING
Certification: May be used in lieu of VA01-05 courses for fulfillment of the course requirement for advanced certification in a Virtua sub-system. Pre-requisites and exam in the sub-system must also be successfully completed for certification.

Course Description:

Intended to complete the implementation of a project and identify any issues to resolve before delivery of application training, this consulting visit is usually performed by a VTLS Inc. Project Manager or Support Librarian working with the site's project manager(s), administration, directors and department heads (i.e. policy makers). Participants and agenda determined by customer and VTLS Inc. Project Manager. Includes training in applications used to manage workflow.

- Overview of System Client permissions & parameters
- Language Editor
- Client configuration options
  - Label editor
  - Work forms for cataloging & circulation
  - Language & keyboard options
- Basic Gateway options
- Web Reports

✳TECHNICAL TRAINING

SA0104 INITIAL VIRTUA SYSTEMS TRAINING

Duration: Two day lecture & workshop
Audience: System librarians, database administrators, and systems administrators
Pre-Requisites: SA0101: UNIX I, SA0102: ORACLE I, and SA0103: WEB ADMINISTRATION or equivalent knowledge.
Certification: Basic certification in UNIX I, ORACLE I, WEB Administration I, and successful completion of this course and exam fulfill the requirements for certification in VIRTUA Systems: Database Administrator.

Course Description:

This course is usually delivered at the conclusion of the project implementation phase and just prior to application training. It is intended for systems managers and is delivered by a Customer Support Technical Analyst. It is often incorporated with on site software installation and/or upgrades.

- Virtua System Overview & Directory Structure
- Naming Conventions in Virtua
- Unix Environmental variables
- PS Drivers
- Virtua Upgrades
- Retrospective Keyword Indexing
- Changing Log-in passwords & adding user accounts
- Installation, Upgrade, & Customization of the Virtua web gateway
- Using Vload to load records

✱APPLICATIONS TRAINING

Virtua Applications training consists of five days of lecture, demonstrations, and hands-on practice. Should the library wish to participate in the Certification program, additional time in necessary after the trainer leaves for administering exams. These exams are to be taken within 2 weeks of the delivery of the training.

Virtua Applications classes teach those skills needed to accomplish routine library tasks. Virtua Basics/OPAC teaches information generic to all sub-system and must be taken prior by all staff prior to attending training in the other sub-systems.

VA0101 INTRODUCTION TO VIRTUA/OPAC

Duration: Half-day lecture & workshop
Audience: Intended for all Virtua users
Pre-Requisites: General knowledge of library procedures
Certification: Successful completion of this course and exam fulfills the requirements for basic certification in OPAC.

Course Description:

This training will cover basic Virtua functions necessary to task completion across all Virtua applications, notably: navigation, online searching, MARC record identification and management, item record management and information dissemination. Presentation is demonstration style with opportunity for practice. Certification in this course is a prerequisite for certification in all other Virtua applications.

- MARC formats: Bibliographic, Patron, Vendor
- Searching: Browse, Keyword, Control Number
- Item records: viewing, adding, editing, relinking
- Information Dissemination: Print, Email, Save

VA0102 CIRCULATION

Duration: One-day lecture & workshop
Audience: Intended for front line circulation staff.
Pre-Requisites: VA0101: INTRODUCTION TO VIRTUA and good working knowledge of circulation practices
Certification: Basic certification in OPAC and successful completion of this course and exam fulfills the requirements for basic certification in Circulation.

Course Description:

This training covers the concepts of basic circulation transactions and inventory control with the Virtua Client. Presentation is demonstration style with opportunity for practice. After this training the user will be able to comfortably manage a circulation desk.

- Basic circulation desk functions: check-in, check-out, renewals
- Requesting materials: holds, loans, recalls, paging requests
- Patron records, activity & account information
- Notices & reports for inventory control
- Course Reserve subsystem

VA0103 ACQUISITIONS

Duration: One-day lecture & workshop
Audience: Intended for staff in acquisitions departments
Pre-Requisites: VA0101: INTRODUCTION TO VIRTUA and good working knowledge of acquisition practices
Certification: Basic certification in OPAC and successful completion of this course and exam fulfills the requirements for basic certification in Acquisitions.

Course Description:

This training covers the concepts of acquisition workflows and order management with the Virtua client. Presentation is demonstration style with opportunity for practice. Configuration issues should be determined with Acquisitions and Fund Accounting Consulting prior to application training.

- Acquisition workflows
- Vendor Record Management
- Order Management
- Invoice Management
- Credit Management

VA0104 CATALOGING

Duration: One and one-half day lecture & workshop
Audience: Intended for staff in cataloging departments
Pre-Requisites: VA0101: INTRODUCTION TO VIRTUA and good working knowledge of MARC and cataloging practices
Certification: Basic certification in OPAC and successful completion of this course and exam fulfills the requirements for basic certification in cataloging.

Course Description:

This training covers the concepts of cataloging and authority control with the Virtua Client. Presentation is demonstration style with opportunity for practice. Sites new to MARC and/or AACR2 cataloging practices for bibliographic and authority control, or those who simply desire more in-depth coverage of cataloging techniques in an online environment, should combine this course with the Cataloging Practices and Procedures course.

- Overview, configuration options (user permissions, views, languages)
- Technical services workflow
- Work forms & local records
- Creation & maintenance of database & local records
- Authority control, cross-references & notes
- Non-MARC format records

VA0105 SERIALS

Duration: One day lecture & workshop
Audience: Intended for staff in serials department
Pre-Requisites: VA0101: INTRODUCTION TO VIRTUA and good working knowledge of MARC Holdings Format and the use of coded holdings and prediction patterns.
Certification: Basic certification in OPAC and successful completion of this course and exam fulfills the requirements for basic certification in serials.

Course Description:

This training covers the concepts of serials control and predictive check-in with the Virtua Client. Presentation is demonstration style with opportunity for practice. Sites new to the MARC Holdings Format and/or serials check-in practices in an online environment should combine this course with the Serials Cataloging Practices and Procedures course.

- Relationship of bibliographic, holdings, item & check-in records.
- Creating & managing holdings info using Virtua's 3-tiered record structure.
- Use of the 853 tag for establishing publication patterns.
- Serials check-in using prediction patterns
- Use of 863 & 866 tags with title specific holdings (subscriptions & issues).
- Using locally defined 9XX tags.
- Use of routing lists.
- Claims and reminders.
- EDI

Ongoing Training

After project implementation, additional training takes place during Account Maintenance Site visits, at users' group meetings, at conference sessions, at VTLS Inc. headquarters throughout the year, and at sites that request customized training.

Assignment of Responsibilities

Library will provide all necessary client and server hardware and operating software and a suitable training room. Systems training may occur at the location of the server. For Applications training, access to the training room needs to be provided prior to the first training session so that the trainer can set up.

The training room will need to have the following equipment:

- ✓ Workstations with access to a web browser and the Virtua ILS Client (no more than two people per workstation);
- ✓ Workstation for the trainer; and
- ✓ Data show/electronic overhead projector, and whiteboard.

Library will provide (prior to training):

- ✓ A list of participants requiring course materials;
- ✓ A set of five (5) simple titles (per participant), in any format except serial and monographic series, for catalog training; and
- ✓ A group of trainees familiar with computers (Windows, keyboard, mouse).

VTLS Inc. will provide:

- ✓ A test database on which to conduct the training;
- ✓ A trainer and workshop support person; and
- ✓ A set of detailed training notes and exercises for each module.

1.16: Test Database

TRAINING DATABASE

Virtua Applications training is hands-on and opportunities for practice include modifying the information in the database. For this reason VTLS Inc. does not train on customers' production databases but instead uses a training database of teaching examples augmented by bibliographic records from the customer's database. If in the course of Pre-implementation and Implementation training it becomes apparent that the library has training requirements that cannot be met with our standard training database, VTLS Inc. Customer Service will modify our database to meet those needs.

1.17: References

1.17.1: References

Virtua Installations, Similar to Frederick County

Jewish Public Library
Contact: Eddie Paul
Systems Manager
Phone: 514-345-2627
Email: eddiep@jplmtl.org
Installed: May 2001

New Hanover County Public Libraries
Contact: David Paynter
Library Director
Phone: 910-341-4395
Email: dpaynter@co.new-hanover.nc.us
Installed: March 2001

University of Tennessee at Chattanooga
Contact: Randy Whitson
Assistant Library Director
Phone: 423-755-4469
Email: randy-whitson@utc.edu
Installed: December 2000

West Virginia State College
Contact: Dr. Ravindra N. Sharma
Phone: 304-766-3117
Email: sharmarn@ernie.wvsc.wvnet.edu
Installed: August 2000

Mary Washington College Libraries
Contact: Bob Grattan
Phone: 540-654-1756
Email: bgrattan @mwc.edu
Installed: February 2000

Newport News Public Libraries
Contact: Pat Anderson
Associate Library Director
Phone: 757-926-8506
Email: panderso@ci.newport-news.va.us
Installed: Scheduled Go Live Date of August 2001

1.17.2: Customer List

Virtua Installations (In Live Operation):

Asian Development Bank (Philippines), 64 users. Hardware: HP
AT&T (USA), 256 users. Hardware: SUN
Central Corporate Service Unit (Australia), 12 users. Hardware: SUN
Central Queensland University (Australia):
Goteborg University (Sweden), 384 users. Hardware: SUN
Graceland College (IA-USA)
Hua Chiew Chalermprakiat University (Thailand)
Institut d'Estadistica de Catalunya (Spain)
Jewish Public Library (Canada)

Kentucky Christian College (KY-USA)
Komenius University (Slovak Republic)
Lund University (Sweden)
Marshall University (USA), 128 users. Hardware: DEC
Mary Washington College (USA), 64 users. Hardware: HP
Nashua School District (NH-USA)
National Library of Medicine (USA), 16 users. Hardware: SUN
Newberry Library (IL-USA)
New Hanover County Public Library (NC-USA)
New York University (NY-USA)
Northeastern State University (OK-USA)
Northern Territory Library & Information Service (Australia), 128 users. Hardware: SUN
Nunavut Legislative Library (Canada)
Otis College of Art and Design (CA-USA)
Pentagon Library (USA), 64 users. Hardware: SUN
Rajabhat Institute Petchburiwittayalongkorn (Thailand)
RERO Union Catalog (Switzerland), 512 users. Hardware: IBM
Rose State College (OK-USA)
Samford University (AL-USA)
Singleton Shire (Australia)
Sunshine Coast University (Australia), 32 users. Hardware: SUN
Supreme Court of the United States (DC-USA)
Tamkang University (Taiwan), 64 users. Hardware: SUN
Technical University of Gadnsk (Poland), 32 users. Hardware: HP
TEI of Thessaloniki (Greece)
Uniao Educacional de Sao Paulo/FISP (Brazil)
Universidade Federal de Viçosa/FGV (Brazil)
Université Catholique de Louvain (Belgium), 128 users. Hardware: SUN

Universite of Campinias-UNICAMP (Brazil), 128 users. Hardware: IBM
Universiti Kebangsaan Malaysia-UKM (Maylasia), 128 users. Hardware: SUN
Universiti Tun Abdul Razak-UNITAR (Malaysia), 81 users. Hardware: SUN
University Brunei Darussalam-UBD (Brunei), 64 users. Hardware: HP
University of Gdansk (Poland)
University of New England (Australia)
University of Southern Queensland (Australia)
University of Tennessee – Chattanooga (TN-USA)
Virginia Vocational Curriculum Resource Center (VA-USA)
West Virginia State College (WV-USA)
Wilkes University (PA-USA)
Winterthur Museum Library (USA), 32 users. Hardware: HP
Xavier University (LA-USA)
Wroclaw University (Poland)

VTLS Inc. Worldwide Customer Base

Asian Development Bank (Philippines) v
AT&T Corporation (NJ-USA) v
Academy of Economics (Poland)
Academy of Fine Arts (Poland)
Academy of Music Art (Poland)
Agricultural University of Cracow (Poland)
Agricultural University of Lublin (Poland)
Albert Einstein College of Medicine (NY-USA) v (scheduled)
Alberta Justice (Canada) v
Alderson Public Library (WV-USA)
Alexandria (Egypt) v (scheduled)
American Library in Paris (France)
American University in Bulgaria (Bulgaria)
Asian Development Bank (Philippines)
Asian University of Science & Technology (Thailand)
Belington Public Library (WV-USA)
Biblioteca de Catalunya (Spain)
Biblioteca de la Fundació Universitària del Bagés (Spain)
Biblioteka Uniwersytetu Mikolaja Kopernika (Poland)
Biblioteques Especialitzades de la Generalitat de Catalunya (Spain)
Blinn College Library (TX-USA)
Bluefield State College (WV-USA)
Bolivar-Harpers Ferry Public Library (WV-USA)
Boone-Madison Public Library (WV-USA)
Bundesamt für Informatik (Germany)
Burlington Public Library (WV-USA)
Burnsville Public Library (WV-USA)
Cabell County Public Library (WV-USA)
Cameron University Library (OK-USA)

Canterbury Municipal Library (Australia)
Canton Library Thurgau (Switzerland)
Cap Gemini France (France)
Capon Bridge Public Library (WV-USA)
Catholic University of Lublin (Poland)
Central Corporate Service Unit (Australia) v
Central Queensland University (Australia) v
Centre d'Estudis I Recursos Culturals (Spain)
Charles Gibson Public Library (WV-USA)
City-County Public Library of Mondsville (WV-USA)
Clarksburg-Harrison Public Library (WV-USA)
Clay County Public Library (WV-USA)
Concord College (WV-USA)
Consell Consultiu de la Generalitat de Catalunya (Spain)
Consorci de Biblioteques Universitàries de Catalunya (Spain)
Cowen Public Library (WV-USA)
Craft Memorial Library (WV-USA)
Craigsville Public Library (WV-USA)
Danish Technical University (Denmark)
Departament de Medi Ambient (Spain)
Department of Indian and Northern Affairs (Canada) v (scheduled)
Department of Jewish Studies, NYU (NY-USA)
Department of Science Service Library (Thailand)
Department of Survey & Mapping (Malaysia)
Diputació de Barcelona (Spain) v
Doddridge County Public Library (WV-USA)
Dora B. Woodyard Memorial Library (WV-USA)
Eastern Asia University (Thailand)
Egyptian Engineering Libraries (Egypt)
Egyptian National Agricultural Library (Egypt) v
Elkins-Randolph County Public Library (WV-USA)
Escola Superior d'Agricultura (Spain)
Escola Universitària de Biblioteconomia I Documentació (Spain)
Faculty of Medicine Siriray Hospital Library (Thailand)
Federal Energy Regulatory Commission (D.C.-USA) v (scheduled)
Federal University of Minas Gerais (Brazil)
Five Rivers Public Library (WV-USA)
Fort Ashby Public Library (WV-USA)
Frederick County Community College (MD-USA)
Frederick County Public Library (MD-USA) v
Fundacao Getulio Vargas (Rio-Brazil)
Fundacao Getulio Vargas (Sao Paolo-Brazil)
Fundació Caixa de Sabadell (Spain)
Gassaway Public Library (WV-USA)
Gilmer Public Library (WV-USA)
Goteborg University Library (Sweden) v

Government of Nunavut (Canada)
Government Printing Office (DC-USA) v
Graceland University (IA-USA) v
Grant County Public Library (WV-USA)
Greater Cincinnati Library Consortium (OH-USA)
Green Bank Public Library (WV-USA)
Greenbrier County Library (WV-USA)
Hampshire County Public Library (WV-USA)
Hawkesbury City Council (Australia)
Hebrew Union College (OH-USA)
Hewlett Packard Technical Center (OR-USA)
Hieronim Lopacinski Voivodship Public Library (Poland)
Houghton College (NY-USA)
Hua Chiew Chalermprakiat University (Thailand) v
Institut d'Estadística de Catalunya (Spain) v
Institut Químic de Sarrià-U.R.L. (Spain)
Institut Teknologi Tun Hussein Onn (Malaysia)
Institut del Teatre (Spain)
Institut Cartogràfic de Catalunya (Spain)
Institute of Nuclear Physics (Poland)
Jabatan Hal Ehwal Wanita (Malaysia)
Jabatan Pengairan Dan Saliran (Malaysia)
Jackson County Public Library (WV-USA)
Jagielloninan Library (Poland)
Jagielloninan Medical College (Poland)
Jewish Public Library (Canada) v
Kentucky Christian College (KY-USA) v
Keyser-Mineral County Library (WV-USA)
Kingwood Public Library (WV-USA)
Kolej Tuanku Abdul Rahman (Malaysia)
Kolej Ugama Sultan Zainal Abidin (Malaysia)
Komenius University (Slovak Republic) v
Kuwait Institute for Scientific Research (Kuwait)
Kuwait University (Kuwait)
Laie Libreria Cafè (Spain)
Library of Virginia (VA-USA)
Liverpool City Public Library (Australia)
Libreria La Central (Spain)
Longwood College Library (VA-USA)
Lund University Library (Sweden) v
Malmo College of Music of Lund University (Sweden)
Marie Curie-Sklodowska University (Poland)
Marshall University (WV-USA) v
Martinsburg-Berkeley County Public Library (WV-USA)
Mary H. Weir Public Library (WV-USA)
Mary Washington College (VA-USA) v

Mason County Public Library (WV-USA)
Medical Sciences Library (Trinidad & Tobago)
Middle East Technical University (Turkey)
Monroe County Public Library (WV-USA)
Montefiore Teaching Hospital (NY-USA) v (scheduled)
Mount Storm Public Library (WV-USA)
Mountain Top Public Library (WV-USA)
Mullens Area Public Library (WV-USA)
Museu Nacional d'Art de Catalunya (Spain)
Museu d'Arqueologia de Catalunya (Spain)
Museu de la Ciència I de la Tècnica de Catalunya (Spain)
Nashua School District (NH-USA) v
National Agricultural Library (MD-USA)
National Development and Family Board (Malaysia)
National Gallery of Art (D.C.-USA)
National Library of Indonesia (Indonesia)
National Library of Malaysia (Malaysia)
National Library of Medicine (MD-USA) v
National Ossolinski Institute (Poland)
National Yiddish Book Center (MA-USA) v
New Hanover County Public Library (NC-USA) v
Newberry Library (IL-USA) v
Newport News Public Library (VA-USA) v
New York University (NY-USA) v
Norfolk State University (VA-USA)
Northeastern State University (OK-USA) v
Northern Territory Library & Information Service (Australia) v
National Union Catalog-NUKat (Poland) v
Nunavut Legislative Library (Canada) v
Oceana Public Library (WV-USA)
Otis College of Art and Design (CA-USA) v (scheduled)
Pahang Islamic College (Malaysia)
Pahang State Library (Malaysia)
Pamunkey Regional Library (VA-USA)
Parkersburg and Wood County Public Library (WV-USA)
Parliament Library (Switzerland)
Paw Paw Public Library (WV-USA)
Payap University Library (Thailand)
Pedigogical University of Cracow (Poland)
Pedigogical University of Kielce (Poland)
Penang State Library (Malaysia)
Pennsboro Public Library (WV-USA)
Pentagon Library (DC-USA) v
Perbadanan Perpustakaan Awam Terengganu (Malaysia)
Pestalozzianum (Switzerland)
Peterstown Public Library (WV-USA)

Philippi Public Library (WV-USA)
Phillips Petroleum Company (OK-USA)
Pineville Library (WV-USA)
Pioneer Memorial Library (WV-USA)
Pleasants County Public Library (WV-USA)
Polish Academy of Science-Gdansk (Poland)
Pontifical Academy of Theology (Poland)
Pontificia Universidade Catolica de Campinas (Brazil)
Poznan University Library (Poland)
Quinwood Public Library (WV-USA)
RERO Server (Switzerland)
RERO – Réseau des Bibliothèques de Suisse occidentale, Union Catalog (Switzerland) v
    RERO Geneva Ville v
    RERO Neuchatel BPUN v
    RERO Neuchatel UNINE v
    RERO University of Geneva v
    RERO Valais v
    RERO Vaud v
    RERO-Fribourg v
Rainelle Public Library (WV-USA)
Rajabhat Institute Mahasarakham (Thailand)
Rajabhat Institute Moo Ban Chom Bung (Thailand)
Rajabhat Institute Petchburiwittayalongkorn (Thailand) v
Rajabhat Institute Phetchaburi (Thailand)
Rajabhat Institute Phranakhon Si Ayutthaya (Thailand)
Rajabhat Institute Phranakorn (Thailand)
Rajabhat Institute Phuket (Thailand)
Rajabhat Institute Sakon Nakhon (Thailand)
Rajabhat Institute Suan Dusit (Thailand)
Raleigh County Public Library (WV-USA)
Richwood Public Library (WV-USA)
Ritchie County Public Library (WV-USA)
Rose State College (OK-USA) v
Rupert Public Library (WV-USA)
Saint Louis Art Museum (MO-USA)
Samford University (AL-USA) v (scheduled)
Santa Catarina Public Libraries (Brazil)
Senatsbibliothek Berlin (Germany)
Servei de Biblioteques de la Generalitat de Catalunya (Spain)
Shepherdstown Public Library (WV-USA)
Siam Commercial Bank Library (Thailand)
Singleton Shire Library (Australia) v
Sirindhorn International Institute of Technology (Thailand)
Sistersville Public Library (WV-USA)
Southern West Virginia Library Automation Corp. (WV-USA)

State Academy of Theatre Art (Poland)
State Scientific Library (Slovak Republic)
Stock Exchange of Thailand (Thailand)
Sukhothai Thammathirat University (Thailand)
Summers County Public Library (WV-USA)
Summersville Public Library (WV-USA)
Sunshine Coast University (Australia) v
Supreme Court of the United States (DC-USA) v (scheduled)
Sutton Public Library (WV-USA)
Swedish School of Economics (Sweden)
Swiss Federal Administration (Switzerland)
Swiss National Library (Switzerland)
TEI of Thessaloniki (Greece) v
Tamkang University (Taiwan) v
Taylor's College Library (Malaysia)
Technical University in Gdansk (Poland) v
Technical University of Lublin (Poland)
Thai Farmers Bank Library (Thailand)
Tomsk State University (Russia)
Town and Country Planning Department (Malaysia)
Tribunal Federal (Switzerland)
Tygart Valley Community Library (WV-USA)
Ubon Ratchathani University (Thailand)
Uniao Educacional de Sao Paulo (Brazil) v
United Arab Emirates University (UAE) v (scheduled)
Universidad Autónoma de Nuevo León (Mexico)
Universidad Católica de Àvila (Spain)
Universidade de Coruña (Spain)
Universidade Estadual de Campinas-UNICAMP (Brazil) v
Universidade Estadual de Santa Catarina (Brazil)
Universidade Federal de Ouro Preto/FGV (Brazil)
Universidade Federal de Uberlandia (Brazil)
Universidade Federal de Viçosa/FGV (Brazil) v
Universidade da Coruña (Spain)
Universidade do Estado do Rio de Janeiro (Brazil)
Universitat Autònoma de Barcelona (Spain)
Universitat Jaume I (Spain)
Universitat Oberta de Catalunya (Spain)
Universitat Politècnica de Catalunya (Spain)
Universitat Pompeu Fabra (Spain)
Universitat Rovira I Virgili (Spain)
Universitat de Barcelona (Spain)
Universitat de Girona (Spain)
Universitat de Lleida (Spain)
Université Catholique de Louvain (Belgium) v
Universite of Compinias (Brazil)

Universiti Brunei Darussalam-UBD (Brunei) v
Universiti Kebangasaan Malaysia-UKM (Malaysia) v
Universiti Malaysia Sabah (Malaysia)
Universiti Malaysia Sarawak (Malaysia)
Universiti Putra Malaysia (Malaysia)
Universiti Tun Abdul Razak-UNITAR (Malaysia) v
University of Alaska (AK-USA)
University of Gdansk (Poland) v (scheduled)
University of Mining and Metallurgy (Poland)
University of New England (Australia) v
University of Silesia (Poland)
University of Southern Queensland (Australia) v
University of Technology (Poland)
University of Tennessee – Chattanooga (TN-USA) v
University of the West Indies – Cave Hill (Barbados)
University of the West Indies (Jamaica)
University of the West Indies (Trinidad and Tobago)
Univerzita Mateja Bela (Slovakia)
Upper Arlington Public Library (OH-USA)
Uppsala University Library (Sweden) v
Virginia State University (VA-USA) v
Virginia Polytechnic Institute and State University (VA-USA)
Virginia Vocational Curriculum & Resource Center (VA-USA) v (scheduled)
Walailak University Library (Thailand)
War Memorial Library (WV-USA)
Warsaw University (Poland) v (scheduled)
Webster-Addison Public Library (WV-USA)
West Virginia Institute of Technology (WV-USA)
West Virginia Library Commission (WV-USA)
West Virginia State College (WV-USA) v
Wilkes University (PA-USA) v
Winterthur Museum Library (DE-USA) v
Wroclaw University (Poland) v
Xavier University (LA-USA) v
Yayasan Sabah (Malaysia)
Yeshiva University (NY-USA) v (scheduled)

1.18: Subcontractors

VTLS Inc. does not propose to use any subcontractors. All of the work done will be done under the supervision of our own managers and carried out by our own support staff.

Should hardware be purchased through VTLS Inc., service as well as equipment will be provided directly by the hardware manufacturer.

1.19: Cost Summary (see separate mailing)

PART TWO:

ANSWERS TO SPECIFIC QUESTIONS

VTLS Inc.

Part 2: Answers to Specific Questions

Response to Specifications The vendor is expected to respond to each of the numbered requirements in the following sections. The following codes must be used to respond to the numbered statements:

A = Available; feature is currently available in at least one installed system.

AD = Available with Deviation; feature is currently available, but differs slightly. Vendor must explain in detail on the exceptions page.

D = In Development; feature is being developed for release. State expected date of release.

P = Planned; feature to be implemented; not yet in development. Indicate expected date of release.

N = Not Planned; feature is not currently planned and is not expected to be added to the system.

Any exceptions the vendor has to anything required or stated in this RFP must be described in full in the Exceptions section of the Systems Costs pages.

System Requirements

Any system quoted by a vendor must be an integrated, client/server library automation system that currently supports the following basic functions:

__A___Bibliographic and Inventory Control
__A___Authority Control
__A___Cataloging/Database Management with Z39.50 client functionality
__A___Public Access Catalog
__A___World Wide Web Catalog Interface
__A___Circulation
__A___Serials Control
__A___Acquisitions and Fund Accounting
__A___Community Information Database
__A___Z39.50 compliancy for the server and all modules
__A___Report Generator
__A___MARC Bibliographic and Authority Record Import/Export Utility
__D___Materials Booking (1st Quarter 2002)
__A___User request and information module
__A___Information gateway (WWW)

FCPL must be able to license and install all of the above modules or features or install them one at a time. The vendor must also quote and be able to provide all of the following products and services to the full extent required for successful system implementation and operation:

__A___ Data Conversion

__A___ Software (both operating and application)
__AD_ Software and Hardware maintenance

Costs for new hardware or hardware additions are not included in the VTLS Inc., proposal. VTLS Inc. does not resell Hewlett Packard Hardware. We will assist FCPL with the hardware procurement, by reviewing final configurations, offering suggestions, etc. Hardware maintenance would be secured direct from the Hardware manufacturer or through an existing Frederick County contract with the hardware supplier.

__A___ Installation and database loading
__A___ Training
__A___ Documentation
__AD__ Hardware

Costs for new hardware or hardware additions are not included in the VTLS Inc., proposal. VTLS Inc. does not resell Hewlett Packard Hardware. We will assist FCPL with the hardware procurement, by reviewing final configurations, offering suggestions, etc.

A. General Requirements

The proposed system must have all of the following capabilities:

__A___1. Require no additional purchases or local programming in order to become operational.

__A___2. The system must be designed for optimum operation in a Web-based computing environment.

__A___3. Use a client/server architecture. All clients must run under Windows 95 or better.

While the Virtua product will operate under Windows 95, we recommend Windows 98 or higher to take advantage of enhanced functions. Windows 2000 is required for full UNICODE support. For standard Latin characters, Windows 95 or 98 is sufficient.

__A___4. All system components must operate in a real-time interactive mode, providing the ability to create, update, maintain, and access all data for library materials and patrons in real time.

__A___5. The system must be installed on a platform with sufficient processor, memory and disk storage, which in the library's estimation, ensure adequate response times.

__A___6. Be fully online and have no dependency on an outside host computer for internal routing operations.

__A___7. Have the capacity for future expansion to support double the number of simultaneous workstation users through the modular addition of storage devices, memory processing units, and workstations, without replacing any existing hardware and without any decrease in response time.

__A___8. Provide for the input and output of bibliographic, authority, and patron data. All bibliographic and authority data will be in USMARC format.

__AD___9. Have the demonstrated capability of supporting, with one central computer configuration sharing a common database, Branch libraries each maintaining different delinquency criteria, fine calculation rules, loan period rules, patron databases and hold parameters; each different library's catalog must also be able to be hidden from the users of the other system; the Library must also be able to define an unlimited number of these agency-specific parameters.

Virtua ILS provides location-specific parameters and user-based permissions. This structure allows each branch (main location) to maintain their own circulation criteria, etc., as specified above.

"Hiding" of individual catalogs is available if searching is restricted to keyword searching only.

__A___10. Have the ability to concurrently run all application modules on the same hardware configuration without having to logoff and logon across modules and without system shutdown.

__A___11. All modules must be graphical and accessible from any workstation through a login procedure.

__AD*_12. All modules must be licensed for the server not the client.

VTLS Inc. is proposing a 128 simultaneous user license.

__A___13. Proposed system must be fully Z39.50 compliant for client and server and configured for full TCP/IP support. It must also easily interface with external databases such as those found on the Internet using TCP/IP and Z39.50 protocol.

__A___14. The system must be capable of transparent functionality with Ethernet and TCP/IP compatible local area networks. The Vendor must be able to supply a list of at least 50 current library customers with a minimum database size of 100,000 titles that are available for Web-based PAC searching via the Internet.

__A___15. Fully integrated, using a single common, catalog database for all operations and a common operator interface across all modules.

__A___16. Hardware resources must be expandable to large networks including RAID, multiple processor computers and multiple servers or must be reducible to as little as a single workstation configuration.

__A___17. The database engine must support mission critical database management with full auditing and rollback.

__A___18. Protection for application, system and data files through the use of passwords or other security measures must be provided so that information critical functions cannot be performed without proper authorization.

__A___19. The proposed software must include procedures and programs that enable rapid recovery from hardware or software failure.

__A___20. Once configured by the library, built-in security protection for software modules and sub-modules must be invisible to the user; that is, password access must not be necessary at each level of software except when deliberately configured that way by the library.

__A___21. The system must be configurable so that it does not even display on specific workstations the modules and sub-modules to which those stations do not have access.

__A___22. If the system fails to function according to library specifications, the vendor will make necessary modifications, retest and reinstall software in a time period to be specified in the contractual agreement.

VTLS Inc. will negotiate mutually agreeable terms and conditions during contract negotiations. Our standard contracts are provided in Appendix B.

__A___23. The system shall protect the central files from erasure or contamination.

__A___24. The system must be able to operate 24 hours a day, 7 days a week, 52 weeks a year. The system must be available for staff and patron use while backup procedures are being performed.

Hot backups are a function of the backup software being used by FCPL and it's compatibility with the Oracle RDBMS. Oracle does permit hot backups. The Virtua ILS places no restrictions on the third party backup software.

__A___25. The vendor must provide support service 24 hours a day, 7 days a week, 365 days a year. The vendor must provide direct access to its own support staff, and not use third-party staff, third party answering services or voice mail. Library access to vendor support must not be restricted to specific library-authorized staff.

Customer Services representatives are available twenty-four hours a day, seven days a week. You may telephone them Monday through Friday, 8:00 am to 8:00 pm Eastern Time. In addition to the regular telephone hours, VTLS Inc. provides 24-hour emergency service to assist customers whose systems are down or in immediate danger of failure.

__A___26. Expansion, including additional features, modules, or hardware shall be possible without interruption to the programs already operational.

_AD__27. Software upgrades shall be requested by FCPL and supplied to FCPL in a self-installing form, preferably ftp download or an upgrade via a Web site. Instructions for software upgrades must be provided by the vendor before the upgrade is installed.

Virtua client software is self-installing. Application of a new client release generally takes less than 5 minutes. The Virtua server software is not self-installing.

__A___28. The system must be capable of reading FCPL's existing item and patron barcodes. With the addition of the Detention Center Library the software must also be capable of reading a second type of item and patron barcodes. (see Section K "Barcodes" for more detail)

__AD__29. The system must allow for unattended backup onto industry standard magnetic storage media. All backup operations should be completed via a menu-driven interface with no separate programs

or knowledge of UNIX or other operating system software procedures required.

Scheduling unattended backups maybe accomplished through the use of most standard backup software products. The product chosen by FCPL should be compatible with the Oracle RDBMS.

__A___30. The system must be UNICODE-compliant and correctly display UNICODE-based fonts in the PAC.

Virtua is the ONLY fully UNICODE compliant product in the industry. Data is stored in true UTF8 format. To take full advantage of all UNICODE characters, Windows 2000 is required. Support of Latin characters may be achieved using Windows 95, 98 or NT.

__A___31. A backup system for circulation must be available. All transactions on the backup system must directly feed into the main system and immediately update all files when it is again available.

__A___32. No specialized console printing can be required.

__A___33. The system must be able to support SIP2-compliant patron self-checkout stations.

__A__34. The system must support workstations designed for patrons with special needs, including blind and hearing-impaired patrons.

__A___35. Using a single type of printer, the system must be capable of producing: cash register-type receipts, statements of checked out items, receipts for checked in books, and copies of any patron account statuses available to an operator at checkout or check-in.

__A___36. Any vendor proposed system must be capable of working with third party software.

Virtua imports and exports information in 2709 format and standard ASCII formats. Additional interfacing may require customization at additional costs.

B. Client and User Interface Requirements

_____1. Vendor must offer a choice of distinct client software for use in accessing and operating the proposed server modules, including, but not limited to:

__N___ a character-based client stored on the host computer for use by workstation or web access users, without the need for local client software

__A___ Windows staff client with a graphical user interface (GUI) designed for use on PC's running Microsoft Windows 95 or better.

__A___ World Wide Web (WWW) client that permits access to all public services offered by the library through standard Web browsers such as Netscape, Internet Explorer, etc.

__A___ Fully-integrated Z39.50 cataloging client supporting searching and capture of MARC bibliographic and authority records from any Z39.50 compliant server

__AD___2. Any software proposed by the vendor must allow flexibility when designing screens. FCPL must be able to easily redesign any screen without programmer or vendor intervention.

Virtua uses a concept called screen views. FCPL may define which MARC tags are included in a view (i.e., intermediate list of titles, full card view, item screen header, etc.) and the associated label for the information being presented. Full redesign/control of screens is not possible.

__A___3. The system must enable an authorized library administrator to determine the exact text of help screens user-by-user.

Help files reside on the local desktop. Therefore, the text of help screens may be modified for a particular user of the workstation, but not a user type as defined at the system level (i.e., staff versus resident patron). This would allow a different set of help files to exist for the children's area, the juvenile detention center and the adult sections.

__A___4. Help text must be available for each command. The operator must be able to request and receive context-sensitive help for the command in use with a single keystroke.

Context-sensitive help is readily available by using the F1 key.

__A___5. An operator must be able to page backwards and forwards through the help text.

__A___6. The client must perform all edit checking of user input before sending input to the server.

__A___7. The client must control all attached peripherals, including barcode readers and printers.

__A___8. The software must accept input from devices such as barcode readers attached to a workstation.

__A___9. The initial logon to the system must set all privileges for all modules and must not require operators to change "subsystems" to perform a different set of commands.

__A___10. The system's modules must be aware of activities performed by other modules and of the data available to them.

__A___11. All commands must be available to an authorized user simultaneously, without the need to switch modules, menus or screens.

__AD___12. Users must be able to compile and run reports at any time without significant performance degradation, including during backup operations.

VTLS Inc. does not recommend running reports during backup procedures as conflicts with table access may cause inaccurate results.

__AD___13. The vendor must provide Web-server access to all service requests placed by a specific customer. The customer may place service requests via e-mail, Web or by telephone.

Third-party telephone connectivity is under development and will be available by the end of 2001.

C. Network/Information Access Requirements

__A__1. The system must be configurable to connect to the Internet and to other libraries and services.

__A__2. The system must include a PAC module that allows on or off site searching of the PAC with any standard graphical web browser (Netscape, Internet Explorer, etc.).

__A__3. The system must provide access to local URLs.

__A__4. Through the PAC module (with its Z39.50 client capabilities), a user must be able to search for materials among the collections of

other library systems that have Z39.50 server support for their catalogs.

__A__5. The web client must be HTML based and may be customized/configured without vendor or programmer intervention or assistance.

__A__6. The vendor must provide an interface to the PAC that is WAP/WML enabled.

__A__7. The database must be manipulated using standard query language without using proprietary vendor software.

D. **Central Processing Unit (if new hardware is recommended)**

VTLS Inc. is submitting a software-only proposal. We will assist FCPL in the procurement of add-on hardware components or replacements hardware.

__NA___1. The CPU, as well as other proposed equipment must not require any special environment. A normal office environment must suffice. The system's hardware platform must be tolerant of varying environmental conditions including ranges of temperatures (40 to 80 degrees Fahrenheit) and humidity (10 to 90%).

__NA___2. The CPU must be capable of supporting all functions of the fully integrated system, including expansion to accommodate libraries and modules that are not part of this bid.

__NA___3. The CPU must include a CPU processor, disk storage (potential capacity of at least 20 GB), *appropriate* backup device, UPS, power monitoring software, and diagnostic modem. Any other equipment considered necessary by the vendor must be stated separately from the above requirements and an explanation given for its inclusion.

__NA___4. The CPU must provide sufficient storage space for three years of normal growth (5% annually) for the database and modules specified in this document.

__NA___5. The vendor must provide software that automatically performs an orderly shutdown of the system when power is lost.

__NA___6. The UPS must provide enough power for several minutes of operation prior to beginning an orderly shutdown of the system.

Although specified by the library, the time between power loss and the beginning of shutdown will not exceed 5 minutes.

__NA___7. The CPU must include an Ethernet port that may be connected to a TCP/IP Local Area Network.

Required Database Features

A. Bibliographic Files

__A___1. The system must store MARC bibliographic records of the library's collection, providing efficient, complete access to the collection, and protecting the integrity of the database while providing the flexibility to import and /or export records from/to other databases.

__A___2. Cataloging and database editing functions must be configurable so that they are available only from designated staff terminals.

__A___3. Pre-formatted screens (templates) should be provided for local MARC data entry and editing. The library must be able to create any number of templates for its own use.

__A___4. Automated error checking of local data entries for conformity to US MARC rules should be included as a feature of this module.

__A___5. The system must accept MARC records from on-line bibliographic utilities.

__A___6 The system must support electronic transfer of individual bibliographic records without changing or deleting fields in the US MARC format.

__A___7 The system must detect duplicate records (bibliographic, authority and holdings records) being loaded to it and retain them separately for manual review.

__A___8 The system must load full US MARC bibliographic records (virtually without limit to the record length)

__A___9 The system must load brief US MARC records.

__AD___10. The system must provide a method for entering and verifying hypertext links.

VTLS Inc., has a crawler program which can verify that hypertext links are formatted correctly. It does not verify that the link is a valid/live link.

__A___11. Bibliographic records must be indexed for access from a variety of points, including personal names, corporate names, conference names, titles, parallel titles, uniform titles, variant titles, series titles, subject headings (including cross-references), OCLC numbers, barcode numbers, ISBN/ISSN numbers, LCCN numbers, format and item level call numbers.

B. Database Files

__A___1. The system must provide access to and maintenance of bibliographic and authority MARC record formats.

__A___2. The system must be able to access multiple cataloging resource databases.

__A___ 3. It must provide for manual keying of new (original) bibliographic and authority records into the database in US MARC format.

__A___ 4. The system's database must be directly accessible to third-party printing and reporting tools such as Microsoft Word and Microsoft Access by using an appropriate ODBC driver or file format.

Oracle does support access to it's underlying tables using ODBC drivers. This means that ODBC supporting applications can fairly easily see the Oracle data. We have not specifically explored the ODBC support within Word or Access.

C. Authority File

__A___1. The system must load, maintain and output a database of authority records in full US MARC authority format.

__A___ 2. The Cataloging Module supports the same record creation, modification and deletion capabilities for authority records as for bibliographic records.

__A___ 3. New authority records must automatically create all "see" and "see also" references for bibliographic records containing that authority heading.

__A___ 4. The system must use existing indexed entries from bibliographic records for verification so that MARC authority records are only required for "see" and "see also" references and not for every heading in the bibliographic database.

__A___ 5. The system must provide a method for differentiating between LC and non-LC authorities, and support multiple thesauri based upon the different listings from which authorities come including at least author, title, subject and LCCH.

__A___ 6. The system must provide immediate, real-time indexing of all authority records added to the system.

__A___ 7. The system must verify authority headings against existing bibliographic and authority entries in real time.

__A___ 8. The system must display upon request a list of valid headings from the authority file when the heading keyed does not match an existing heading already in the authority file. Authorized staff must be allowed to correct and/or replace incorrect headings.

__A___9. All fields in the US MARC authority records, including the fixed and variable fields must be editable either individually or globally.

__A___10. The system must automatically generate "see" and "see also" authority references as authority records are edited.

__A___ 11. The system must accommodate authority records whether generated in-house or loaded from external sources including bibliographic utilities, Library of Congress, and others.

__A___12. The system must allow records to be selected and reviewed by authority for verification of in-house and external sources.

__A___13. Local entry and editing must be provided through formatted screens.

__A___14 The system must allow authority files to be printed and/or downloaded in US MARC format.

__A___15 The system must be designed to accommodate changes in the US MARC authority format and new national standards formats as they are developed (e.g. new format for LCCNs).

__A___16. The system must link each heading in the library's authority files to each occurrence of that heading in the bibliographic file.

__A___17. Users must be able to verify headings in a bibliographic record against existing authorized headings

__A___18. Bibliographic records must be automatically re-linked to authority records when authorities are merged or changed.

__A___19. The system must permit the operator to select a heading from an authority or existing bibliographic record list.

__A___20. The system must update all occurrences of a heading in a bibliographic file with a single machine transaction.

Global changes to authority heading are easily managed in Virtua due to the link between the authority record containing the heading and the associated bibliographic records. By editing the heading in the authority record, the heading change is reflected in all associated bibliographic records.

__A___21. The system must match incoming LC or other national standard authority records against the local file.

__A___22. The system should allow authorized headings or entries to be added, changed, or deleted as part of a new bibliographic record and record the source of that authorized heading or entry.

__A___23. The system must provide reports that list headings used for the first time, invalid headings that should not have been used (matches "see"), cross references that are blind either because no record exists or because a record has been deleted, duplicate barcodes, and duplicate authority records.

__A___24. Authorized records for headings and entries must include the source of authority, the date authorized or first used, the date of last revision, related "see," "see also," "see from," and "see also from" references.

__A___25. The system must include "earlier/former," "later," and "broader/narrower" search term references that indicate relationships between two headings.

__A___26. The system must store and index local subject headings. These headings must be searchable from authorized workstations.

__A___27. The system must display references, scope notes, reference notes, and general information notes.

__A___28. The authority file must be browsable to view adjacent headings and entries as well as the related entries and notes.

__A___29. The system must display, upon request the total number of bibliographic records linked to a specific authority heading and individual bibliographic records linked to a specified authority heading.

__A___30. The system must accommodate personal, corporate, and topical name headings in a name authority file, title, uniform title and series entries in a title authority file, and subject headings in a subject authority file.

__A___31. The system must allow authorized staff to transfer a keyword, phrase or exact heading from an authority record to a bibliographic record and transfer a keyword or phrase from a bibliographic record to an authority record.

__A___32. The system must allow authorized staff to use a keyword or phrase from an authority display in a search without retyping.

__A___33. The system must check the operator's input against the appropriate authority entries for fields under authority control.

__A___34. The system must enable an authorized operator to retrieve and display records flagged as unauthorized on-line at the workstation and print these records.

__A___35. The system must allow an authorized user to modify authority control policies to include additional thesauri after initial installation of the system.

__A___36. The system must not impose a limit on the number of "see from" and "see also from" headings that may be added to an authority record.

__A___37. The system must be configured to have separate indexes for LC name and subject headings, NLM subjects, or other locally defined indexes.

__A___38. The system must be configurable to accommodate a single authority index or the addition of multiple indexes.

__A___39. The system must enable authorized staff to change default system values for thesauri at a later date.

__A___40. The system must allow correction of incorrect headings by authorized staff.

D. Patron File

__A___1. The information entered, stored and/or linked in the patron database must include, but is not limited to the following fields:

- **__A__** title [preferred form of address]
- **__A__** name (last, first and middle initial)
- **__A__** permanent and secondary address
- **__A__** city, state and zip code
- **__A__** multiple phone numbers
- **__A__** patron type or category
- **__A__** date the record was created
- **__A__** barcode number
- **__A__** manual block field
- **__A__** date record was last updated
- **__A__** alternate ID number (PIN)
- **__A__** issuing Branch library
- **__A__** note field or free text field that cannot be viewed by the patron from remote access
- **__A__** email address
- **__A__** materials outstanding
- **__A__** fines and fees owed
- **__A__** hold requests
- **__A__** date card was last used (last activity)

__AD___2. Patron information must be indexed by at least patron ID number, patron name, alternate ID number, zip code, and date library card was last used.

Patron information may be accessed by name, primary and secondary ids. Future plans include keyword indexing of the patron records to allow access from all patron record elements.

__AD___3. The system must be able to detect duplicate patron records. Duplicate checking must be possible on any library designated indexed field(s) within the patron record.

Duplicate checking is done on patron IDs only.

__A___4. The system must allow patron records to be created, modified, copied and deleted by authorized staff.

__A___5. Pseudo-patrons such as technical processing, bindery or even another library must be accepted as valid patrons.

__A___6. The system must support an unlimited number of patron types (such as patron, staff, in-house, and books by mail).

__A___7. The patron ID must be a unique identifying number to preclude duplicate records for the same patron ID.

__A___8. The alternate ID (if there is data stored in this field) must also be a unique index, so entering a driver's license number or SSN in this field provides a double protection against duplicate patron records.

__A__9. The system must provide coded fields and/or templates to expedite the entry of patron information. Codes entered must be verified against a list of existing codes to insure database integrity.

Workforms (templates) may be constructed to contain the FCPL-defined mandatory elements for patron records. Default information may be stored in the workform to facilitate easy data entry. In addition, Virtua provides real-time validation. This validation is governed by a rules file. FCPL can establish a set of rules for patron records. Each record will be checked against the established rules prior to being saved to the database. Patron records with missing mandatory elements will be flagged.

__AD__10. The system must allow for printing a specific patron record including all currently checked out items, holds and outstanding fines and fees, etc. This information will print continuously until the end of the information is printed and not one section (items checked out, fines, etc) per page.

This information must be printed out according to tab and section.

__A___11. The system must accept patron records in machine-readable form for initial database creation.

__A___12. The system must permit the library to define the amount of patron information that can be seen from the main checkout screen and by patrons accessing their record from a PAC or remote login.

__AD__13. The patron file must be accessible by staff using the patron's surname, barcode or some other alternate identifier.

The patron file may be accessed using name and primary and secondary ids.

__A___14. The system must allow authorized staff to browse, alphabetically by last name, through the patron database.

__A___15. The system must allow staff to assign a new barcode to a patron when the old one is lost without otherwise affecting the existing patron record. The patron information and items charged to the patron from the old barcode must be linked to the new barcode.

__AD___16. The system shall allow authorized staff to execute global updates to subsets of the patron file, up to the full patron file.

A find and replace feature has been discussed as a future enhancement, but is not on the development schedule as of this date. Depending on the type of update, this function could currently be accomplished using an SQL script.

__A___17. The system must allow for easy retrieval and editing of a patron record from within the checkout mode.

__A___18. Authorized staff must have the ability to delete a password or PIN in order to assist patrons who have forgotten their password or PIN.

__A___19. Patrons must have the ability to change their password or PIN from a PAC, remote login or with staff assistance.

__AD__20. The system must allow the library to purge inactive patrons automatically according to Library-defined parameters (such as, date of last action and/or type of patron).

This cannot be done if there are outstanding fines.

__A___21. Patrons with items checked out, fines or blocks must not be automatically deleted.

__A___22. The system must generate a report of patrons who met the deletion requirements but were maintained in the system because of conditions described in the item above.

E. Data Files for MARC and Item Records

__A___1. The system must accommodate a labeled item record to uniquely identify copies or volumes of a specific title.

__A___2. This record must contain a unique number corresponding to an optically scannable identifier such as a barcode.

__A___3. MARC data may include monographs, government documents, serials, media pieces, or other types of material. Item records must be linked to an item-specific barcode number, fine level, material type, notes, call number (Dewey), series, and loan period.

__A___4. Item records must also link to due date (if checked out), the last discharge date, number of circulations since a specified date, and holds against the item.

__A___5. In the public access mode, item status must be automatically displayed to the user retrieving the record.

__A___6. Holdings records for series and monographic sets must include a summary format as well as volume-specific and copy-specific data.

__A___7. The system must automatically link item records to bibliographic records in real time, if appropriate copy information has been placed in specified USMARC fields.

__A___8. The system must be compatible with a variety of barcode labels, including 3 of 9, and CODABAR, Code 39 barcode formats.

__AD__9. This record should contain a barcode, the shelf location, branch location, circulation status, statistical category, loan rule used, material format/ material class, item call number, circulation counter (e.g. total circulation count, circulation since library specified date), renewal counter, last activity date, note fields, last date returned, cost, and space for other library-defined fixed or variable length fields.

The item record is a system generated, fixed length record. Currently there is no provision for other library-defined fixed or variable length fields.

__N___10. Item records must be variable in length, with a variable number of variable fields, which may be repeatable and allow for a separate call number in each item record. FCPL should also be able to specify additional new variable-length field and their display labels.

The item record is a system-generated, fixed length record.

__A___11. The barcode number and item call number must be indexed for direct retrieval of item records All other fields must be available for reporting purposes.

__A___12. The system must provide for coded fields to expedite the entry of item information. Codes entered must be verified against a list of existing codes to ensure database integrity.

__A___13. An operator must be able to create a temporary set of item record defaults to apply in batch editing/rapid updating of existing records.

__A___14. If a value is undefined in the parameter table for a fixed field, it must not be possible to accept it and store the item record.

__AD__15. It should be possible to suppress the display of item records in the OPAC.

Currently, bibliographic records may be suppressed from display. Future plans do include the suppression of individual item records.

__A___16. The creation of item records for materials on order without assigning a barcode to the item record must be allowed.

__A___17. It should be possible for the library to specify up to *500* individual locations.

Up to 99,999 different main locations and 9,999 sub locations may be defined.

__A___18. The system must support up to a five-character location code with up to 22 characters available for display in the OPAC.

Location codes are 5 digits and display of the location label (i.e., Main -- Juvenile) is more than 22 characters.

__A___19. It must be possible to create, edit and delete item records from a workstation.

__A___20. It should be possible to delete multiple items efficiently by either keying line numbers or a range of line numbers, or by scanning barcodes.

__A___21. It must be possible to create item records in serials as individual issues are checked in.

__D___22. When issues with items are bound in serials, the system must automatically delete the individual item records and create a new item record for the bound volume at the operator's discretion.

__A___23. The system must generate on demand a report, by individual library location if desired, that details those bibliographic records that no longer have item records attached.

Functional Specifications

A. Cataloging

The Cataloging module maintains the bibliographic database and authority control files in full MARC format. This module supports the creation, modification and deletion of bibliographic item and authority control records and accommodates indexing rules.

__A___1. The system must provide the tools needed to catalog a record quickly and accurately. These tools include:

- __A__ local access to a large copy cataloging resource pool
- __A__ global, instantaneous subject and series authority control
- __A__ immediate record availability from other system modules
- __A__ full screen editing
- __A__ ALA/US MARC character set forms
- __A__ cataloging templates for original record entry
- __A__ customized card and label printing
- __A__ full cut-and-paste capability in the editor
- __A__ accommodation of additional library –defined MARC tags

__A___2. The system must maintain a bibliographic database in full MARC format. It must also utilize current MARC conventions for all material types, including the integrated MARC format. The proposed system must also support the full MARC standard for record lengths and field lengths: 100,000 characters and 10,000 characters respectively.

__A___3. Except as defined by the MARC21 standard, the system must not place any limits on the total size of a MARC record or any given field, the total number of fields stored, or the number of occurrences of any given field. If so, provide a description of any limits.

__AD*_4. The system must provide for global field changes to MARC records including specific subdivisions of authoritized headings regardless of their position. The global change facility system must also permit the user to make programmed global changes to any field in any other record type on the system, including patrons, items and course records.

Global changes are supported for authority headings. Global changes to other record types are not currently supported.

__A___5. The system must permit the cataloging system to be updated to reflect LC changes in bibliographic formats.

__A___6. The system must be able to display all diacritics and special characters that appear in OCLC and LC records.

__A___7. The system permits individual cataloging records to be updated.

__A__8. The system must notify an operator, online, if a duplicate record is being added. Duplicate checking must be available on all indexed fields. The library must be able to specify the fields upon which duplicate checking will occur.

Duplicate checking is based on LCCN, ISBN, ISSN and OCLC No. The library may specify which of these elements should be used for duplicate checking.

__AD__9. The system must accommodate the transfer of copy holdings (all item/volume records attached or selected item/volume records attached) to another bibliographic record by clicking and dragging the information from one record to another. The undesired bibliographic record must also be deleted, if desired, as part of the transfer process.

Virtua does permit the transfer or relinking of item records to a different bibliographic record. This is done using a pull down menu, not a click and drag action.

__A___10. Cataloging must import and retain all encoding levels of bibliographic records.

__A___11. The system must accommodate batch loading of bibliographic records in the library's database.

__A___12. Indexing must be done automatically as records are added to the database.

__A__13. Cataloging must offer several views of a single record, including:

__A___ FULL EDITOR: MARC display including all fields, sub-fields, fixed length field elements, indicators, and leader information (with or without fixed labels and/or lengths displaying).

__A___ CARD VIEW" displays the full card set (one at a time) that would result from the record selected.

__A___14. This module must provide for entry and indexing of the library's own call numbers.

__A___15. All material formats within MARC bibliographic record(s) must be accepted and differentiated.

__A___16. During loading, all fields (including fixed fields) and sub-fields must be retained so that records can be exported later in US MARC format without additional editing (fields or tags must not be stripped from MARC records).

__A___17. All field and sub-fields must be editable.

__A___18. Records must be modifiable without retyping the entire line or data field.

__A___19. The system must accept all Roman alphabet characters and all non-Roman languages (if transliterated).

__A___20. The system must not permit bibliographic records to be deleted if any other part of the system has activity related to it (e.g. there is a fine due on the item, a hold pending for the item, a copy is on order, etc). A message should alert staff to the reason the record cannot be deleted.

__A___21. The system must be able to export all or part of the bibliographic database in full US MARC format without vendor intervention.

__A__22. Bar codes should be validated by check-digit and number of digits by the software.

This is a function of the barcode reader, not of the Virtua software. The Virtua software verifies that the number entered exists in the database, but not verify the correct reading of the number.

__A___23. When supported by the appropriate hardware, the library must be able to generate a magnetic tape copy of its records in US MARC format.

__A___24. The system must require appropriate operator authorization to maintain bibliographic and authority records.

__A___25. The system must permit records in the database to be added, edited, copied and deleted.

__A___26. The system must accept records from multiple MARC-based sources including OCLC, file supplied by vendors, such as Brodart, Z39.50 transfer of records, and CD-ROM products such as Bibliofile and Book in Print Plus.

Virtua accepts records from any vendor who exports records in 2709 format.

__A___27. The system must provide at least 100 MARC-defined work screens which may be modified and allow for the reuse of default bibliographic data.

__A___28. In the Cataloging module, bibliographic records must be accessible by any and all of the search indexes available in the PAC. These records must also be accessible by other library-defined access points that might not be available in the PAC such as ISBN, OCLC number, or local system control number. Such access must be available from a single prompt.

__A___29. The system must allow for a single standard number index that includes, but is not limited to, MARC fields 010, 020, 022, 024, 028, 037.

__AD___30. The system must allow for global changes to bibliographic or item records that do not necessarily involve headings in authority records.

Depending on the type of change desired, it could be possible to perform the change using an SQL script.

__AD___31. The system must allow for the creation of work files through the use of a report generator or Boolean search capacity. The resulting file can:

__A___ Be brought into the cataloging module for easy record updating.

__A___ Be used with a rapid or batch update capability.
__N___ Be used with a global change capability.
__N___ Be used with a purge capability.
__A___ Be used at any time in the future as a live file of editable records, reflecting the current information as retained by the system at the time of use.

__A___32. The system must support multiple mapping tables for importing MARC records.

__A___33. The system must be capable of outputting all, or any library-defined subset of, bibliographic records in MARC format. This report must be sortable by library defined fields.

__A___34. When importing records via online or batch interface, the system must store and display only those MARC fields that contain data.

__A___35. The system must allow for the "cloning" (copying) of existing bibliographic records for easy creation of new bibliographic records.

__A___36. FCPL must be able to define the display order and field tags for brief and full bibliographic display.

__A___37. It shall be possible to replace records that are incomplete with full MARC records using an overlay procedure without costing copy specific information. It should be possible to suppress the display of bibliographic records in the OPAC.

__AD___38. The system must have the ability to copy and paste MARC fields, as well as drag and drop them, from one bibliographic record to another.

Copy and paste is available. Drag and drop is not available.

__A___39. The system must be capable of creating a report of bibliographic records, based on operator-defined search criteria and sorted by location and/or call number in the item record.

__A___40. The system must collect cataloging statistics and generate detailed reports both online and in hard copy on demand. Time periods for these reports must be Library-defined.

__A___41. The system must generate on demand a variety of lists, including: LC authorities, non-LC authorities, bibliographic and authority records added to the system during a specified time period.

__A___42. The system must generate statistics on records added with breakdowns such as format, language, date cataloged, etc.

__A___43. The system must provide a full screen editor for cataloging which allows movement across fields with cursor arrows, block and paste, block and delete, field delete, field undelete, word wrap, and field restore which returns a field to its condition prior to any editing in that session.

__A___44. The full screen editor must expand the 008 and the 007 fields so that its constituent parts can be edited individually and the field then reassembled automatically.

__A___45. The system must provide context-sensitive help related to MARC tag information, and also be able to validate automatically the MARC record, or any part thereof, for MARC encoding errors.

__AD__46. The system must support a master bibliographic record containing all call numbers, notes subject headings, etc. that may be required by different locations.

Workforms containing default information for various material formats may be created and stored on a network drive. We are unsure of the intent of this specification.

__A___47. The system must enable barcode readers attached to workstations to b used to input data, such as item labels, into bibliographic records.

A1. Copy Cataloging

__A___1. In addition to any MARC record loading utilities and interfaces to bibliographic utilities, the system must use the Z39.50 client for Windows to capture MARC bibliographic records and authority records and import them from OCLC and other Z39.50 compliant databases into the catalog editor ready for modification.

__A___2. The system's Z39.50 client must be fully integrated with cataloging and authority control.

__AD___3. The system must with one keystroke be able to capture a MARC bibliographic or authority record from any Z39.50 version 2 or 3 server, and without any staff intervention or batch processing do the following:

Not with one keystroke

__A___ match imported records against existing catalog records based on library specified match keys
__A___ notify the operator of any duplicates
__A___ assign the call number to the incoming record
__A___ allow the operator to replace a matching record with the imported record
__A__ replace an on-order record with a full catalog record, without first requiring the library to assign a common match key to each record
__A___ index the full text of the bibliographic record for keyword searching
__A___ place the captured authority records editor ready for staff manipulation
__A___ assign the format based on fixed field encoding.

__AD*__4. The system must log to a printer all OCLC exports indicating whether the export overlaid or created a new record on the library's system.

Virtua provides a report for this purpose. The report may be scheduled to run according to your preference.

__A___5. Record overlay must not affect library-defined local fields.

__A___6. The system must enable the operator to:

__A___ save records to the review file one at a time, or in stated ranges
__A___ view records stored in a review file using proposer's client software
__A___ remove individual records from the review file
__A___ duplicate records in the review file
__A___ print records in the review file.

__A___7. The system must run all imported records from OCLC against the authority files and generate a daily report of headings to be checked.

B. MARC Holdings Records

__A___ 1. The system must support the US MARC Format for Holdings.

__A___ 2. The system must maintain the US MARC Holdings Records on a separate screen, fully integrated with the MARC descriptive catalog record.

__A___3. The system must display consolidated holdings based on the ANSI Z39.44 Serial Holdings Display format.

__A___4. The system must display the full US MARC Holdings Record for staff displays.

__A___5. The system must provide a full-record editor for manipulating, adding, editing and inserting any data, including fixed field information, within the US MARC Holdings Record.

__A___ 6. The system must provide labeled forms for manual creation of US MARC Holdings Records.

__A___7. The system must allow a US MARC Holdings Record to be associated with any descriptive catalog record stored in the system:

__A___ MARC (monographs)
__A__ Serials
__A___ Other:

Item records may be attached to holdings records if the library circulates individual issues.

__A___8. For US MARC Holdings Records associated with serials, the proposer's predictive check-in system must automatically generate the US MARC Holdings Record.

__A___9. The system must allow multiple US MARC Holdings Records to be associated, and seamlessly linked, to a single MARC descriptive catalog record.

__A___11. The predictive check-in system in the serials module must automatically generate separate US MARC Holdings Records for each location within each library, and associate separate libraries and accompanying US MARC Holdings Records with a single MARC descriptive catalog record.

__AD_ 12. The system proposed must allow searches within the PAC to be limited to the holdings of a single library.

Filtering by location is available using a keyword search, but not in browse searching.

__A___13. The system proposed must be capable of importing existing US MARC Holdings Records from external sources.

__A___14. The system proposed must be capable of exporting US MARC Holdings Records from the system in full US MARC format.

__A___15. The system must enable an authorized operator to select records for export.

__A___16. Import and export of all US MARC data maintained by the system must be possible without vendor intervention, or additional cost.

__A___17. The proposed system must include a Z39.50 version 3 compliant catalog without additional charge.

C. Circulation Control

The Circulation Control module enables FCPL to track the circulation and availability of items within the system and to monitor patron delinquencies.

__A__1. This module must be fully integrated with other system modules and Features.

__A___2. This system should interface with self-checkout systems and automated telephone renewal systems.

__A___3. It must use the database maintained by the Cataloging module, so whenever a record is added or edited in Cataloging, it is immediately available to the Circulation module.

__A___4. Patron information and "on-the-fly" item entries can be entered directly through the Circulation module.

__A___5. The system must support separate circulation privileges by location and patron type.

__A___6. The system must feature a single keystroke or mouse click for renewal of materials.

__A___7. Check-in and checkout must feature a batch mode for multiple items.

__A___8. The system must have independent fine rates and notice production by location and patron type.

__A___9. Every patron's record must have a unique ID number that can be in the form of a barcode.

__A___10. Circulation must provide for checking inventory status of items which are supposed to be on the shelf, quick access to title/item information for editing the record, and support for managing Hold materials.

__A___11. The system must support a status of "claims returned" and " claims never checked out." These statuses must be recorded in the patron record. Information in the patron record should include a simple counter field for number of times claims returned have been made.

__AD_12. During the claims returned process, the system shall automatically update the Note field, without the operator having to input the following information manually: the date of the claim, the item number.

To manage a "claimed returned" situation, the operator would move the overdue item from the overdue category to the disputed category, by highlighting the line item and clicking the dispute button. This action is automatically logged in the transaction file. A note must be added.

__A___13. The system must contain a system of library-defined statuses that can be changed by any authorized operator without programmer or vendor intervention. There must be an unlimited number of statuses allowed.

B1. Circulation Control Parameters

__A___1. The system must permit circulation parameters to be library or Branch specific, library item type specific and/or library patron type specific.

__A___2. An unlimited number of patron types, item types, fine/fee types, locations, collection groups, and other codes must be supported without vendor intervention. A difference in any one of these elements can result in an entirely different type of circulation load being invoked.

__A___3. The system must be flexible so FCPL staff can modify the information that controls due dates, grace periods, renewal and holding capabilities, fines, overdue schedules and content of overdue notices, replacement and processing costs, and fine increment information.

__A___4. Loan rules shall provide options/control for:

__A__ daily loan periods
__A__ hourly loan periods with overnight/no overnight Aprivileges and rounded to the hour
__A__ number of possible renewals
__A__ length of renewals

__A__ hold status
__A__ number and timing of overdue notices sent
__A___ text of each overdue, hold availability, and billing notice
__A__ grace period for fines
__A___ fine rates and time lengths (minimum must be 3 different rates and time periods)
__A___ default item replacement cost to be used when an item cost is not specified in the item record
__A__ processing fee
__A__ billing fee
__A__ text of message for adjustments (e.g. patron receives message with adjusted fine after return of lost book).

__A___5. FCPL must be able to specify which kinds of materials (and how many of each) may be borrowed by which kind of patron.

__A___6. Loan periods must be configurable for all combinations of item and patron types.

__A___7. Fines and fees must be definable by FCPL, can be changed at any time and must include charges for photocopies, database searches, interlibrary loan fees, etc.

__A___8. Loan periods and due dates must be calculated according to the type of borrower, type of material and library service hours allowing for holidays and hours library is closed.

__A___9. The system must permit the parameters to be deleted, overwritten or copied by an authorized staff without programmer or vendor intervention.

__A___10. The system must verify the patron and item record data against all tables as the records are created.

__A___11. The system must allow for wildcard operators within each parameter to be used for groups of item types, patron types, or locations that utilize the same loan rules.

__A___12. The system must include clear audible and visual signals that barcode labels have been read and the information accepted.

B2. Checkout Procedures

__A___1. The system must calculate and display the new due date when items are renewed.

__A___2. Loan periods ranging from hours to years must be allowed.

__A___3. The system must permit the entry of the borrower and item identification, using a barcode scanner or keyboard.

__AD___4. The system must permit a check digit calculation to assure that the numbers have been accurately entered. The system must alert the operator visually and audibly when the barcode label is incomplete or incorrect.

Verification of a correct reading is the function of the barcode reader. Virtua will verify that the number entered by the reader exists in the database and give a visual and audible signal if it does not.

__A___5. Authorized staff must be able to access a patron's record by barcode entry, partial or full name search, or any other library-defined/system indexed access point.

__A___6. The system must allow for searching of patron files or the bibliographic database without exiting the checkout function or interruption of the checkout process.

__A___7. The system must permit the creation of a temporary "on the fly" record for items and permits circulation of materials which are not yet in the database.

__A___9. The system must display on the checkout screen: patron name, patron barcode, item barcode, and due date.

__A___10. Outstanding blocks with an explanatory message will automatically displayed when the patron record is accessed during checkout.

__A___11. Automatic patron blocks must be possible for the following:

- __A___ too much money owed
- __A___ too many items checked out. The system must be able to distinguish different thresholds for different item types.
- __A___ library card has expired
- __A___ excessive overdues as defined by the Library

__AD*__12. FCPL must be able to manually block any patron for library specified reasons via a single character code in the patron record.

This code must be completely defined by the library with no intervention from programmers or the vendor.

Some block codes are system defined and system assigned when the blocking condition is reached. Additional block codes may be defined by FCPL. Block codes are stored/placed in the 007 fixed fields. To manually set or remove a patron block, the block code is entered (or deleted from) the 007 field of the MARC patron record.

__A___13. The operator must have the option of printing a due date slip for the patron, from a receipt printer attached to the circulation workstation, which identifies the titles that have been checked out. The slip must include at least the following information: a heading with the library name and phone number, barcode of the item, short title of the item, patrons name or number and due date.

Please see Appendix A for sample due date slips.

__A___14. The system must provide the option of printing a single slip for each title or one slip that includes a list of each title checked out.

__A___15. The system must transfer materials to special borrowers or other locations without counting these charges in the circulation statistics.

__A___16. The system must check out multiple items with various due dates after entering a single patron identifier.

__A___17. The system must list outstanding holds for a patron on demand.

__A___18. The system must alert the operator if a patron barcode is entered when an item barcode is expected and vice versa.

__A___19. The system must detect items that have not been checked in and audibly and visually alert the operator allowing for a check-in/checkout function.

__A___20. From a standard checkout screen, with only one or two simple keystrokes/mouse clicks, the system must allow an authorized operator to:

__A___ renew items
__A___ search patron records
__A___ update/edit patron records
__A___ collect fines, either in full or any form of partial payment

__A___ place a hold
__A___ display a patron's fine account, fine history, claims returned history, hold list, overdue list, currently checked out list, interlibrary loans list
__A___ search the patron file by any index point

__P___21. The overdue list available to the operator at checkout must include a running total of accruing fines as of that minute.

__P___22. The display of blocks and other patron transaction history shall be sortable by column (i.e. by due date, transaction location, transaction type).

Column sorting will be available in a future release.

__A___23. The system must allow transfer between functions (checkout, renewal, fine listing/paying, overdue lists/accruing fines, holds/place a hold, edit patron record) without severing the patron link.

__A___24. The system must permit the checkout of items with library-defined statuses (e.g. in circulation, lost, missing, etc.) without interruption.

__A___25. The system must permit operator entered alternate due date to remain valid for the duration of the patron's transaction. The system automatically reverts to the default due date when a new patron barcode is scanned.

__AD*_26. With only 1 or 2 keystrokes/mouse clicks, the system must allow an authorized operator to merge two patron records into a single account (a source record and a destination record). When performing this operation, the system shall merge all fines, overdues, holds, and related patron history into a single account. The system shall automatically update the notes field to indicate the source record and when the merge transaction occurred.

Merging of two patron records in not currently supported. We would like to better understand the need behind this specification.

If a barcode is lost and a new barcode is issued, this is done by replacing the old barcode with a new one in the patron record. All the existing and former circulation transactions are automatically linked to the new barcode number.

__A___27. The system must automatically visually and audibly alert the operator in the event of a patron or item block. Such block must require operator acknowledgment before checkout can proceed.

__A___28. All blocks must have the option to be overridden by an authorized operator. Overrides must be recorded in a special file for later review. Information in this file must include date, time, location, initials of the overriding staff member and patron name and number.

__A___29. The system must automatically block the circulation of items that point to a non-circulating loan rule or which have a status of "In Library Use Only."

__A___30. The system must check to see if an item is being held, blocking the checkout to all but the requesting patron if an item is in the hold file. The system must allow an authorized operator to override the block and checkout the item without altering the hold queue (patron for whom the item was trapped remains at the top of the hold list). Authorized staff must also be able to override this block, checkout the item and alter the hold queue (patron for whom the item was trapped is deleted from the hold list).

__A___31. The system must support self-checkout.

__A___32. There must be a batch checkout and check-in mode that does not stop for each fine transaction during check –in.

__A___33. A method of auditing fee collection activities must be included in the software.

__A___34. New patrons must be able to charge materials immediately upon receipt of their library cards.

__A___35. An audible and/or visual signal must occur if a borrower is not registered or if a card's privileges have been revoked or blocked.

__A___36. Circulation must automatically block checkout of materials to borrowers who have a library-specified number of items overdue, a specified number of items already checked out or who have unpaid fines/fees over a specified amount.

B3. Renewals

__A___1. The system must allow renewals to be performed from a checkout screen without moving to a renewal screen. The same controls as exist for checkout must apply to renewals.

__A___2. The system must display onscreen the original date of checkout, the item's location code, a brief title and the item barcode.

__AD_3. The system must allow the operator to renew all items or a specified list of items, including gaps such as items "1, 3-5," etc. The user must be able to select these items by pointing and clicking on them.

The current release allows selection of individual line items: 1, 3-5. The renew all function will be available in Virtua Build 40 which is scheduled to be released to Quality Control for testing in October 2001.

__A___4. The system must allow for renewals without either the patron or item being present.

__A___5. The system must allow for renewals by scanning item barcodes randomly. The system shall not require the operator to determine in advance the identity of the original borrower before proceeding with the renewal transaction. The system must then determine on an item-by-item basis, the patron possessing the material and whether to permit that renewal, based upon all standard, library-defined rules.

__A___6. The system must block item renewal if the patron is delinquent, the title has a hold registered against it, the renewal limit has been reached, or an item is restricted in some other way.

__A___7. The system must check borrower and item records for any exceptions during renewal.

__A___8. The system must automatically calculate a new due date based on library set parameters for renewals.

__A___9. The system must allow the renewal of overdue items without leaving the renewal function, but any fines due must be added to the patrons record.

__A___10. The system must allow the operator to change manually the due date of renewed items.

__A___11. The system must permit automatic online renewals by patrons from a PAC or by remote login.

__D___12. The system must be compatible with automatic online telephone renewal systems.

Negotiations are under way with a third party supplier to provide this functionality by the end of 2001.

__A___13. The system must audibly and visually alert the operator of a patron or item block. The operator must acknowledge the block before the renewal can proceed.

__A___14. All blocks must have the option to be overridden by an authorized operator.

__A___15. The system must allow the Library to restrict the number of renewals that can be made by a patron according to patron or item type or the item's location.

__A___16. The system must audibly and visually alert an operator when the item a patron is attempting to renew is checked out to a different patron.

B4. Check-in

__A___1. The system must alert the operator audibly and visually when items checked in have one of the following statuses and require operator acknowledgment before proceeding with the check-in:

__A___	on hold
__A___	needs full cataloging
__A___	lost item
__A__	missing item
__A___	not returned to correct location
__A___	other library defined message
__A___	belongs to another location

__A___2. The system must provide the operator the option of initiating a transaction print as a receipt for the patron.

__A___3. The system must allow for a book drop type check-in that allows an authorized operator to set the date and time of check-in. In this situation, barcodes are scanned in bulk. The only screen display or audible signal is for returned materials with a hold, special note(s), owned by another location or needing full cataloging.

__A___4. During check-in operations, the system must accommodate transactions such as "claims returned" or "claims never had,"

missing," and a variety of other missing status codes, and provide reports of items so identified.

__A___5. The system must alert the operator audibly and visually with an explanatory message if the item being checked in belongs to another location. Options should include: check-in the item, don't check-in the item, check-in the item and set the status to In Transit, and don't check-in the item and set the status to In Transit.

B5. Circulation Control – Fines

__A___1. The system must allow the Library to set independent parameters for fines, notice production, etc. Rates may vary according to location, item type, patron type or a combination thereof.

__A___2. The system must allow an authorized operator to attach a special block or fee to a patron record for any reason. A free form text message may be associated with the block.

__N___3. The system must clear patron records of fines by at least the following parameters. Cleared records may be purged.

__N__ charges incurred before a certain date
__N__ charges less than a certain amount
__N__ specific types of charges only
__N__ specific item locations only
__N__ patrons of a certain type
__N__ patrons in a library-specified file

__N___4. Once patron fine records are cleared, such charges may be purged at the library's discretion.

__A___5. The system must calculate and display fines at the time of check-in or renewal. Full or partial payment must be accepted at check-in or checkout.

__A___6. The system must print receipts for fines paid showing date, time, amount, and items for which money was received and patrons name or barcode number.

__A___7. All patron accounting transactions must be date stamped.

__A___8. The system must permit an authorized staff to waive or modify system assigned charges.

__A___9. The system must permit an authorized staff to access online the patron's fine and payment record, itemizing the details of each item. Detail should include at a minimum: invoice number, type of charge/description, amount due, amount paid, and date of activity. In addition to the above, overdue charges should include the call number, author, title, barcode, date checked out, date checked in, date returned. Any and all exceptions should be described.

__AD___10. The system must maintain a daily record of fines or fees levied, fines or fees waived, fines or fees collected by agency and by collectors, and be capable of providing a cash box total by workstation for the purposes of balancing with a money drawer. Staff must be able to print this information.

__A__11. The system must have the option, on a transaction basis, to check in materials without assessing a fine.

__AD___12. When displaying fine accounts on the screen, the display must be storable by any column on the page, including date, location, fine amount, and transaction type.

Some displays are now "sortable" by column. The fine screen is not currently sortable by column.

__A___13. A patron's total fines and/or fees due must be accessible without paging through the fine payment history.

__A___14. An authorized staff member must be able to view an individual fine in a patron record. The display should include, but not be limited to

__A___ item barcode
__A___ title
__A___ check out date
__A___ check in date
__A___ fine amount
__A___ data related to partial payment

__A___15. The system must have the ability to keep a history of a patron's fine payments that includes the amounts charged, amounts paid and dates. This fine payment history must be stored for a Library specified period of time and authorized staff member must have the ability to print this fine/payment history.

__A___16. A patron's fine balance when viewed from a PAC or from remote login must reflect the current balance due.

B5. Circulation Control – Notices

__A___1. Notices generated by the system must include overdues, fines, bills, final bill (replacement) notices, recall, hold availability and hold cancellation, statement of charges, and statement of checked out items that are not necessarily overdue.

__A___2. The system must allow an authorized user to produce notices from any workstation. These notices once ordered, shall be automatically produced by the system.

__A___3. The automatic production shall include the patron-chosen notification format, whether paper, telephone message or e-mail.

__A__4. The system must allow an individual branch library to elect whether or not to send fine notices.

__A___5. The system must generate automatically on demand a final notice incorporating the replacement price of the item.

__A___6. All notices must include the call number, item barcode, title and author from the appropriate item record and the patron's name or barcode number.

__A___7. FCPL must be able to specify the sizes and formats available for notices.

__A___8. The system must allow FCPL to determine the message text of all notices and to modify them at anytime without vendor or programmer intervention.

__A___9. The system must permit multiple items (no less than eight on a single 8.5 by 11 sheet) to be included on a single notice.

The number of items per sheet depends on the data FCPL includes for each item.

__A___10. The patron's record must store the amount and type of notices that have been sent to that patron.

B6. Circulation Control – Lost Books

__A___1. The system must allow an authorized operator to change the status of an item from "checked out" to "claims returned," "missing," or "lost."

__A___2. If an item with the status of "claims returned" or "missing" or "lost" is returned, the system shall allow the library to define whether or not a fine will be generated.

__A___3. When a status is set to "lost," the system must allow an operator to elect whether or not to generate a bill.

__A___4. The system must permit an operator to remove any and all statuses from the item record.

B7. Circulation Control – Holds

__A___1. The system must allow holds to be placed by title such that the first available copy will fill the request and by item such that only a designated copy will fill the request.

__A___2. The system must allow holds to be placed on items with a status of "on order." These items must automatically be flagged when they are through being processed, alerting staff of the existing hold.

__A___3. The system must prevent a patron from placing a hold if the patron has any blocks. An authorized operator must be able to override this feature.

__A___4. Staff, patrons at a PAC station, or remote patrons must be able to place a hold request for a title.

__A___5. The system will only allow hold requests to be placed for items that are in the circulating collection.

__A___6. A hold placed from any workstation, PAC or remotely must be immediately reflected in all system modules.

__A___7. An unlimited number of hold requests must be maintained for a single title or item.

__A___8. The holds queue must be displayable and printable for a title or item upon request from any staff workstation.

__A___9. Patrons must be able to specify a date after which a hold should be cancelled.

__A___10. The system must support copy specific holds or allow selection by location and media type.

__A___11. The system must provide on demand a printed list of all titles on hold, with the number of holds for each item and title.

__A___12. The system must alert staff that items are currently on the shelf or have been checked –in when holds are placed on those items.

__A___13. The system must automatically cancel holds after the hold's expiration date has passed. This cancellation must not be dependent on running a special job or program to cancel the hold.

__A___ 14. The system must also allow holds to be canceled manually by staff or by the requesting patron from a PAC station or remote logon.

__A___15. The system must block a patron from placing multiple holds on a single item and title. Authorized staff must be able to override this block.

__A___16. The system must allow the Library to set a threshold for the number of holds that a patron may have.

__A___17. The system must allow for holds to be placed on items that are not checked out, but held at another Branch or location.

__A___18. The system must allow for specifying any material format as not available for hold.

__A___19. The system must not permit a patron to insert a recall command when placing her/his own requests.

__AD_20. An authorized operator should easily manipulate the hold queue. The system shall require no more than two keystrokes or mouse clicks to move a patron to another position. However, once the next patron in a hold queue has been notified of the availability of the item, that patron cannot be removed from the head of the hold queue.

__AD_21. The system must support patron-elected, automated, telephone, and e-mail notification systems for hold pickup notices.

FCPL patrons may elect to be notified via regular mail or email at the current time.

__A___22. FCPL must be able to set and change the automatic expiration date calculation for holds without vendor intervention.

AD/D 23. The system must provide statistical records of holds placed, filled, not picked up, and not filled.

A report listing all items with a status of "on hold" by location, call number range and patron type is available. Currently statistics regarding filled, unfilled, placed or not picked up are reported.

This specification has been submitted as an enhancement to the statistics management.

_AD_24. The system must audibly alert the operator when materials on hold are renewed or checked in. The renewal must then be blocked if holds are found. When this occurs the system must display, on the screen, the name of the patron placing the hold, the title of the item, the barcode number and the location of pickup. A notice should also be automatically be placed in the print queue to send to the patron.

Virtua meets this specification with the exception of displaying the patron's name on the screen with the notification. However, this information is easily accessible by highlighting the discharged item and right clicking. This will display the patron's information who placed the hold.

__A___25. At the point of check-in the system should allow a slip to be printed with the name of the patron the item is on hold for so that the slip can be placed in the book on the hold shelf.

__A___26. The system must permit authorized staff to view online the patron record for whom a particular item is being held.

__A___27. The system must produce notices, printed and e-mail, alerting patrons of held materials, including the pick-up location, the title of the item and the last date the material(s) will be held.

__A___28. The system must monitor the length of time items sit on the hold shelf. If the time exceeds the number of days defined to hold, the hold must be canceled and at the library option, an appropriate notice sent to the patron. If there are other patrons in the hold queue, the system shall alert the operator in the identical manner as any other trapped hold.

__P___29. The system must generate a "purchase alert" when the ratio of holds to the number of available copies and/or the number on order exceeds a Library-set threshold.

__A___30. Holds must allow for pickup at either main or Branch libraries, and alert operator to the pickup location.

__A___31. The system must allow holds to be placed by title such that the first available copy at any location will fill the request.

D. Public Access Catalog

The Public Access Catalog (PAC) module enables staff and patrons to access the bibliographic files of the Integrated Library System according to library specified parameters, via all system workstations, PACS and remote Web access.

__A___1. The PAC module must be fully integrated with all other system modules and include the following:

- __A___ full cross-referencing
- __A___ graphical interfaces
- __A___ various search modes, from easy to advanced
- __A___ complete or partial word searches
- __A___ keyword searches (with Boolean logic operators)
- __A___ subject searches (with Boolean logic operators)
- __A___ search delimiters – publication date range, material format, etc.
- __A___ Internet access supported
- __A___ bibliographies

__A___2. The system must provide full indexing for the PAC; i.e., all words in all fields of the bibliographic record must be keyword indexed.

__A___3. The PAC must be Web-based and require only a standard Web browser (e.g. Netscape or Internet Explorer). The Web catalog shall not require a vendor-supplied specialized browser or client, either for the adult or children's catalog.

__A___4. All bibliographic fields must be full text searchable; i.e., every word of the searchable fields must be indexed, allowing the user to choose keyword and/or phrase searching as appropriate.

__A___5. All PAC displays including summary screens and bibliographic displays must be designed to be easily understood by users. Display contents must be modifiable by the library and easily changed without vendor intervention.

__A___6. PAC users must be able to place holds and specify the location for material pickup.

__A___7. FCPL must be able to block specific items from PAC searches.

__A___8. PAC users must be able to build and sort a bibliography on the system and then save it by printing, downloading it to disk or emailing.

__A___9. The PAC must automatically return to a "start screen" after a Library determined period of inactivity.

__A___10. When the system detects more than one record that matches the search criteria, it must display a count of all the matches and a screen list of titles from which to choose.

__A___11. Patrons must be able to view their own record, place a hold or renew items already checked out from any PAC workstation or when using the PAC remotely.

__A___12. Actual wording of item status display should be modifiable by the library and (at the library's discretion) items with selected statuses, such as long overdue, lost or missing, should be configurable not to display at all.

__A___13. Special versions of the PAC and help screens (children's, large print, etc.) should be configurable by the library.

__A___14. Special interfaces, such as talking terminal or TTY interface must be available.

These special features for the hearing impaired are available from third-party vendors for an additional cost.

__A___15. The PAC Web screen shall allow the library to define and insert automatic links to other library-selected content-provider pages, e.g. lists of book reviews, retail trade information, and book jacket illustration, etc.

__A___16. The system must be Unicode-complaint and correctly display Unicode-base fonts in the PAC.

__A___17. The PAC shall offer a minimum of 2 formats: public view and staff view. In the staff view, the system shall provide information about the bibliographic record as is available in the cataloging module including, but not limited to record number, creation date, revision counts, date of last modification, and record location code.

__A___18. The PAC must be integrated with other subsystems (e.g. circulation, cataloging, etc.), i.e. the item display must include the circulation status, or order status, as appropriate.

__AD_19. The system must allow FCPL to define menus, summary screens and bibliographic and item record displays.

Virtua uses a concept called a view. For example, the full card screen is a view. FCPL will select which MARC tags are used on this screen, what labels precede the data, the order and the justification. Item record displays are fixed. Separate views exist for the various record types: bibliographic, patron, community information, etc. Community information views would contain labels suitable for that data.

__A___20. The system must allow the patron, through simple search queries, to determine whether items are owned, where they are located and whether or not they are available with the item's current status shown in real time. File reorganizations or overnight or other kinds of batch processing that are required for the system to reflect a change in an item's status are not desired and should be described in full.

__A___21. PAC workstations must be restricted to "read only" in catalog holdings, status, and patron information.

__A___22. The system must not use special labeled keys, derived search keys, or function keys as the sole method for searching.

__A___23. The system must allow the patron the ability to jump backward and forward to any prior point in a search path without having to retrace the entire search.

__A___24. The system must allow the patron to move from one bibliographic description to the next without having to return to a browse list to select the next title.

__AD___25. The system must automatically retrieve variant spellings (e.g., labor and labour).

Virtua's browse search places the user at the point closest to the entry, displaying the entry above and below. Depending on the extent of the spelling variation, the user may see the variant entry in the browse list. An alternative way to manage variant spellings would be to apply authority control and enter the variant spelling as a "see also" reference.

__N___26. The system must offer the user the option of turning a title or subject "browse" search into a keyword search without requiring the user to re-key the search terms.

__N___27. Numbers in titles must display in correct numeric sequence as integers, rather than by ASCII sorting rules.

Virtua uses ASCII sorting rules.

__A___28. The cataloger must be able to program a new item delay, so that there will be time to shelve the item before it shows up in a PAC search.

__AD___29. PAC workstations must be configurable to prevent the user from exiting the PAC software by entering a library specified password.

This may be accomplished using third-party software which prevents exiting windows.

__N___30. The searched item must be highlighted in the retrieved records.

__A___31. The user must be able to initiate a new search from any screen or click on the New Search "button" on the screen.

__A___32. Users must be able to initiate new searches from a record on the screen by "lateral searching" or choosing the search terms from a record on the screen.

__A___33. The system must include a library-defined list of stop words that will not be accepted as search terms. This list will be transparent to the user, and the system must prompt the user with appropriate suggestions when the user attempts to search with stop words.

__A___34. The system must enhance searches by providing "see" and "see also" or "broader: and "narrower" references when appropriate.

___N__35. The system must automatically adjust user's keyword searches when no records are retrieved in an attempt to provide a system response beyond a null set, re-executing the search by inserting a Boolean "AND" or "OR" between the terms, executing a truncated wild card search beginning with the first two letters of the first keyword and/or executing a truncated wild card search beginning with the first letter, plus "a" of the first keyword, proceeding through the alphabet until a hit is retrieved.

__A___36. If no matches are found, the system must in addition to displaying a browse list, also retain on the screen the term or terms used in a search until the user enters another search term (allowing errors in input).

__AD___37. From the full record display, with a single mouse click, the system must have the ability to display books shelved next to the selected record in true shelf list order with an option to browse backwards and forwards through the index.

__AD__38. For each pre-defined location, the system must display holdings for a defined location first in an item –level browse list. Optionally, the system must provide the ability to display only the holdings for a defined location and no others unless the patron requests other holdings information.

Filtering by location is available using keyword searching. The returned result set would only contain bibliographic records with items belonging to the selected location. In a browse search, because one is browsing the collection (database), all locations are returned. From the item listing, the logon location's items will be presented first.

__A___39. Function logic and selection logic options must be consistent on all screens.

__A___40. The system provides for library-defined mapping of MARC records to the PAC display, with full selection of the screen labels, as well as which MARC fields shall be included in each library defined label and index.

__A___41. The system allows for definition of PAC display constants based on MARC tags and indicators.

__P___42. All searches done by users must be logged automatically by the system, and the system must prepare reports that analyze these searches by location, by type, by time, by popularity of terms used, and produce a list of all searches that do not retrieve specific records matching what the user keyed. These reports must be available on demand in text and graph formats, and be printed or displayed to a workstation.

__A___43. All records must be indexed and available in the PAC when added to the system in cataloging, from a bibliographic utility, or via a Z39.50-based transfer. All indexing shall be completed via online/real-time processing.

__A__44. The system must allow the library to specify any MARC field or any identifiable portion thereof for inclusion/exclusion into any index to the database.

Virtua indexes the entire MARC record for precision word searching. This includes the contents of the 008 and 007 tags.

__A__45. The subject index must index each subject subdivision individually (e.g., a search of "France" will retrieve all subject headings that include the term "France" regardless of its location in the complete subject term.)

__A__46. The system should index a term regardless of how many times it occurs in the system including the keyword index. Any limitations on indexing terms based on their frequency should be described in full.

__A__47. The system must have the option for workstations in branch or the Headquarters Library to display branch or Headquarters holdings first or only those holdings.

C1. PAC – SEARCHING

__A__1. Patrons must be able to limit a search, either initially or secondarily, by year of publication (range of dates), publisher, language, item type, item category (e.g. mystery, fiction, nonfiction etc.), publication format, adult or juvenile, or location.

__A__2. The PAC must support keyword searching of all title, name, subject, notes and selected number fields (individually, in combination, and/or across all fields) in the bibliographic record.

__A__3. The PAC must display the number of occurrences of a keyword in the database.

__A__4. Staff and patrons must have the ability to specify the fields to be searched.

__A__5. The system must normalize searches so that results are not affected by upper and lower case, diacritical marks, use of upper and lower case letters, use of leading articles, minor variations in punctuation, or spacing.

__A__6. The system must allow name, title, genre, and subject searches, with no requirement that users enter a full heading or derived search keys.

__A___7. Keyword searching must allow for truncation (e.g. comput* would search for all variations).

__A___8. Keyword searching should not have to be an exact match search. If no results are found, terms should be dropped in order to attempt to find results, favoring the most specific results.

__A___9. When a user enters an invalid term, the system must display a readable message describing the cross-reference. The user must then be able to conduct that search by clicking on it, and without having to re-key the search.

__A___10. The system must retain, on the screen, the term or terms used as a search argument for an inquiry against the database to allow checking for errors in input if no matches are found and to validate which terms were found in the system.

__A___11. The system must have easy-to-follow, patron friendly prompts throughout the inquiry process.

__A___12. The system must display on one screen without scrolling, the options for the next stage of a search process as each preceding stage is completed.

__A___13. The system must allow string searches. That is, the system allows users to enter keywords without Boolean connectors and process a search as if Boolean connectors were used. For example, "United States Supreme Court" will retrieve records containing this specific phrase.

__A___14. The system must allow multiple terms to be joined by using Boolean operators (e.g. AND, NOT, OR, NEAR, SAME, WITHIN, and ADJ) and linking operators (e.g. AND NOT).

__N___15. The system must enable searching using relational operators (e.g. less than, greater than, equal to, less than or equal to, greater than or equal to and not equal to.

__A___16. The system must permit browsing through the catalog by allowing users to enter the best available form of search arguments and then display index entries that are alphabetically close to the terms entered.

__A___17. The system must inform the user of the number of records that satisfy the search specifications and display brief bibliographic

data for them as specified. The user should then be able to page forward and backward through the individual records.

__A___18. The system must allow the user to return easily via a single click to the browsing mode or the search mode, by using an on-screen button or the 'Back" button in the browser.

__A___19. The system must automatically include "see" and "see also" references in the alphabetical listing of the authority forms in the authority list to direct the patron to the valid form.

__A___20. From the display of one record, the system must offer the option of displaying related works.

__A___21. The system must be able to display records for items with a status of "on order."

__A___22. The library must have the ability to suppress the display of any title or copy while retaining the record in the database for staff display.

__P___23. All searches done by PAC users must be logged. The system must generate reports that permit authorized library staff to analyze patron searches. Statistics on the types of searches patrons do and the time (hour of the day) when searches are performed should also be reported. These reports and statistics must be sortable by location.

This specification has been submitted as an enhancement.

__A____24. Bibliographic records for the same title must display from newest to oldest.

__A____25. The system must enable search nesting through the use of parentheses.

C2. PAC – Search Results

__A___1. All searches must result in either the display of a record or a browse list. The system must not respond with a negative "no hit" message.

__A___2. A title search that points to a single bibliographic record will display that record in full, including specific copy/holdings information *on the first screen.* The system must not display a title with a reference to the linked items, or a browse list.

__A___3. A name search that matches a single name must display a list of that author's titles and not a browse list of authors.

__A___4. The item status screen must display the call number, location and status without having to key a separate request for this information. Other item status information must be library-defined.

__A___5. There must be an option to display brief bibliographic records, full bibliographic records or MARC records.

__A___6. FCPL must be able to define the display order and field tags for the brief and full bibliographic display.

__AD___7. A title browse list must display location, call number, and shelf status or at the user's option, omit these details.

At the browse level, bibliographic information only is being displayed. Status is maintained at the item level.

__A___8. Item status information must display automatically with a bibliographic record. It must never be necessary to request status information as a second step after bibliographic information has displayed.

__A___9. It must be possible to apply 'limit by' capabilities to search results with multiple headings by any field in the MARC record (e.g., limit all subject headings retrieved). Limit options should include at least the following:

__A__ language
__A__ material type or format

__A__ publisher
__A__ where the item is located
__A__ year of publication
__A__ nature of contents
__A__ juvenile materials

__A__10. Search results from a keyword search must not return the same bibliographic record multiple times.

__AD___11. The system must not return a bibliographic record that has all attached items marked for suppression of display.

Virtua currently masks at the bibliographic level. Item record masking is in development.

__AD___12. The system must allow the user to perform multiple limits on a single search, and to back up to a previous limit level in order to refine further a search query.

The software preserves the search strategy and allows different limits to be applied by reinitiating the search with the new limit.

__A___13. The system must have the option for search results to display only those titles held in the location from which the search was executed.

__A___14. A patron must be able to easily repeat a search (via a pull-down menu) against another location or against the entire shared database.

__A___15. The search strategy and number of hits returned by each search must be displayed.

__A___16. The system must enable the user to page back and forth within the list of records retrieved by any search.

C3. PAC – Printing and Downloading

__A___1. The PAC must permit printing from the screen. A full sheet of paper must be used.

__A___2. Printing must be available either to a printer attached to the workstation or to a shared printer on the network.

__A___3. When accessing a printer from remote terminals, users should be able to select their own printer attached to the remote computer.

__AD___4. The PAC must have a method of printer access control that prevents unauthorized printing or limits the number of citations printed, as determined by the library's policies.

The ability to print may be turned on or off in the Virtua client (i.e, the print button is grayed out, printing multiple copies is grayed out). Virtua does not provide limitations to the number of citations which may be printed nor does the software provide printer access control. There are third party products that perform this function.

__A___5. The system should allow patrons to download information from the PAC to a disk or send it via the Web to their personal email account.

__A___6. The number of pages that will be printed will be displayed before printing. The user will have the option to cancel the print job after the number of pages are displayed.

C4. Access to Other PACs and Databases

__A___1. Accessibility to other library PACs, library-licensed databases, remote networks and the Internet must be available through the PACs, whether such stations are located in the library or remote.

__A___2. The PAC must accommodate remote PCs via a web browser over the Internet. The system must use the same user interface and/or search strategies that are specified for local or remote public access workstations.

__A___3. The system must provide a listing of accessible databases from the initial PAC screen.

__AD___4. When the user chooses to access a database through the PAC, the system should require the patron to identify himself/herself by ID number and optionally a PIN.

Links to the library's subscription databases may be added to the Virtua Web Gateway skin. At the point the link is selected, the database would prompt for userid and password if that is the security used.

__P___5. The system must use library-defined parameters from the patron database to determine whether this patron may be allowed to access the chosen database.

__P___6. The system must maintain a complete statistical package describing the database usage counts, including time of day, workstation location, databases accessed and the patron types accessing them. The data for these reports shall be automatically compiled and saved by the system and be immediately retrievable by a browser-based, point-and-click, report generator.

__A___7. The system must accommodate standard communications protocols and networks, in particular, Ethernet TCP/IP compatibility.

__A___8. The system must provide for Z39.50 Client/Server interfaces. The system must have had a fully functioning Z39.50 module in current release and installed in libraries for the last ***four*** years. Alpha or Beta test sites are not considered valid fulfillments of this requirement.

__A___9. The system should offer the ability to broadcast multiple Z39.50 searches at one time with the ability to view results by responding server.

E. Serials

__A___1. The system must include the following capabilities:

__A___ ordering
__A___ check-in
__A___ claiming
__A___ routing
__A___ fund accounting
__A___ report generation

__A___2. The system must provide the ability to search for serials records by at least title, variant title, call number, ISSN, publisher, vendor, location, uniform title, corporate author/title, conference title, linked title, keyword, subject, or bibliographic utility assigned number.

__A___3. When the issue the operator has in hand is the issue that is expected, a single keystroke records the receipt.

__A___4. With each check-in the system must automatically record the issue chronology, record the date received, record the number of copies received and claim any copies expected and not received and any issues skipped.

Automatic claiming is possible. This is triggered by the calendar passing the expected date, plus whatever wait period FCPL has defined. This is not triggered by the check-in process.

__A___5. The system will predict issue chronology and enumeration based on a pattern entered in the control record by the operator. This pattern provides for up to four subdivisions in the enumeration.

__A___6. Custom naming patterns can be also be established for each control record. For example, date (April 30, 2001), month (May), Season (Summer), and numeration (v.1 #3).

__A___7. The system must allow modification of the expected receipt date information and the pattern at any time.

__A___8. When checking in an issue, if the received issue is not the expected issue, but does conform to the predicting pattern, the system proposed must enable the operator to simply override the predicted number.

__A___9. If the issue received does not conform to the predicting pattern (e.g. a special supplement), the operator can enter the issue designation overriding the prediction.

__A___10. The system must have the ability to show gaps in holdings.

__P___11. The system must be able to print listings of gaps in holdings.

__A___12. The system must be able to distinguish among multiple copies from the same or different sources.

__N___13. The system must support the check-in of multiple copies of an issue on a single check-in screen even when these copies are accommodated in separate records.

Check-in screens are linked to holdings records. In most situations, one holding record exists for each location and a check-in screen is attached to reflect issues received for that location. It is not possible to check-in three issues across three check-in screens.

__A___14. The system must be able to automatically summarize individual issue holdings into a consolidated statement of holdings.

__A___15. The system must be able to display the enumeration and chronology of the most recent issue of a title recorded in the system on a copy specific basis.

__A___16. The system proposed must detect duplicate orders for all formats and alert the operator.

___A__17. For titles with a predictable pattern of enumeration and chronology:

__A___ check-in of issues earlier or later than the next expected issue must be possible using a minimum number of keystrokes

__A___ the operator must not be required to key any data into the check-in screen except to indicate the number of copies received when this more or less than the number of copies expected by the system

__A___ check-in of issues earlier or later than the next expected issue must be accomplished by the operator keying adjustments to the expected issue information displayed.

__A___ accept the change of pattern of enumeration or chronology by authorized operator

__A__ be able to archive old check-in information and automatically create a new check-in screen

__A___18. For titles that do not have a predictable pattern of enumeration or chronology, the system must function so as to require a minimal keying of data by the operator.

_A_19. The system must be able to accept check-in data by scanning the barcode issue identification printed on serials, as well as by operator keying.

__A___20. Recognition of overdue issues must be available regardless of whether or not the title is received on a paid subscription.

__A___21. The system must maintain the following subscription information:

_A____ copies and issues to receive for each subscription

_A____ expiration of each subscription

_A___ vendor for each subscription

_A___ order record for each subscription

__A___22. The system must support a variety of selection criteria for generation of multiple claims, including, but not limited to:

__A___ claims to a specific vendor

__A___ claims for issues that ought to have been received by certain dates

__A___ all claims

F. Statistics

__A___1. The system must provide separate and combined statistics and generate detailed reports both online and in hard copy for all locations.

__N/P___2. At a minimum the system must collect the following statistics:

__N___ total number of searches
__N__ number of searches by type of search
__N___ number of searches against each section of the classification schedule
__N___ number of searches attempted in other databases
__N___ help requests
__N___ number of citations printed and/or downloaded

These specifications have been added an an enhancement request.

__A___3. Statistical reports must be available describing utilization of the collection (or parts of it) to aid in new item selection, weeding, storage decisions, etc.

__A___4. The system must also collect the number of times each item has been checked out. This figure must be sortable by location.

G. Reports

__A___1. The system shall provide a wide variety of standard reports that are derived from data that the system automatically compiles. These standard reports should be generated on demand from menu options.

__A___2. In addition to the standard management/statistical report capability the system must contain an easy-to-use report generator that does not require special training to use and is provided as a base element of the proposed system. Reports generated by this utility may not contain lists of dead reports, as they existed at the time of report compilation.

__A___3. These reports shall come from a statistics set automatically compiled by the system, and retrievable, sortable, and produced by a point-and-click, Web based interface. This report writer facility shall be available externally to and in addition to the system's custom report generator.

__A___4. The system must not maintain basic statistical information in item or patron records so that those records can be deleted/purged at any time without impacting on current historical statistics.

__A___5. Patron statistical information may be obtained from a specific field or a combination of fields on the patron record (status, location, issuing agency, last activity date, etc.).

__A___6. The following reports must be standard reports that are available without any customization:

- __A___ number of patrons currently registered, by patron, status, type issuing agency demographic data, and date the card was issued
- __A___ list of items by location and Library defined status (e.g. lost, missing, etc.)
- __A___ reports on overdue materials based on Library-selected parameters (e.g. patron type, number of days overdue, etc.)
- __A___ total number of bibliographic records and items in the database by location or library unit
- __N___ number and type of transactions by workstation
- __A___ list of items that have not circulated in a specified period of time
- __A___ list of items with "lost" and other statuses that are specified by the user

__A___7. The system must be able to print by location and/or system wide and in shelf list order, reports of all items circulated less than a user specified number of times to facilitate collection weeding.

__A___8. The system must be able to generate fiscal and year end reports. FCPL must be able to define its year-end.

__A___9. The system shall produce a report, on demand, sorted by location and call number, for a specified call number range of records to facilitate collection development.

__A___10. The system shall report an inventory of any portion of the collections, by scanning items on the shelves using a portable optical reader or by printing a report in shelf list order that includes all current statuses.

__A___11. The system must generate reports that are library specific or include a defined set of locations.

__A___12. The system must allow reports to be generated and printed at a central site or remotely.

__A___13. The system must allow data to be collected and reports created and scheduled for different time blocks (hours, days, months, years), stations or locations.

__A___14. The system must allow overdue item verification by generating a list of all overdue items in shelf list sequence by library location so that the shelves may be checked before overdue notices are sent. The system must provide for limiting this list to include only newer overdue items (FCPL specifies the number of days).

__A___15. FCPL must be able to specify the number of overdue notices and reminders prepared and printed for each overdue notice. All overdue notices must show the date due, author, title, call number, and barcode number. This notice must also contain a free text space where FCPL can design what text the notice will include. The vendor must indicate how many lines and/or characters this free text space contains. _____

Notices are produced by constructing a word template (one time). The amount of text the library can place into the notice is dictated by the number of data lines you want connected with each item entry and whether you want to hold the notice to one page. We have included a sample overdue notice in Appendix A.

__A___16. Overdue notice generation must be controlled automatically by library specified intervals between notices. The stored calendar of days of operation must be consulted by the system before overdue and other notices are printed.

__A___17. The system must provide for the printing of billing and hold availability notices. Billing notices shall display the due date, author, title, call number, barcode number, cost of replacement, processing cost and other FCPL specified charges.

__A___18. The system must provide for the electronic notification of overdue and billing notices, and hold availability notices.

__A___19. Staff must be allowed to schedule printing of any notices or reports at any specified date and time including off hours in unattended operation after printer and stock have been aligned.

__A___20. A report must be available that lists outstanding overdue items with a date to be specified by FCPL.

__A___21. The system must be able to discharge long overdue items by declaring them to be lost and billing the borrower accordingly.

__A___22. The system must allow for modification of text of all automatically generated notices after initial set-up without vendor intervention.

__A___23. Authorized personnel must be able to generate printed lists of all of their delinquent borrowers, delinquent borrowers in a certain category (such as by patron type, or over a specified number a books).

__A___24. The system must be able to suppress the production of overdue notices on items with missing, claims returned and other statuses specified by FCPL.

__A___25. The system must enable an authorized user to produce lists and counts of serials issues checked-in, claimed, and/or to be claimed.

__D___26. The system must enable an authorized user to produce a variety of statistical reports including number of serials titles, copies, issues checked in by period, claims issued by type, supplier, etc., and titles without current subscription.

__A___27. On any database reports involving materials FCPL staff must be able to select items for inclusion based on any combination of bibliographic information and on any combination of control information (e.g. number of circulations, number of holds).

__A___28. The system must enable an authorized operator to specify the starting date and time and ending date and time which the report is to cover on reports involving historical data.

__A___29. The system must be able to print a report that lists items with a publication date older than a library specified date and also items published within a library specified range of dates to assist in collection weeding. This report would list the call number, title, date of publication and location.

H. Inventory

__A___1. FCPL staff must be able to monitor the inventory status of any portion of a library's collection.

__A___2. The inventory process must identify items accounted for in inventory checks, items found on shelf with a "non-shelf" status, incorrectly shelved items, and items which the database indicated were on the shelf, but were not found by the inventory scanning process.

__A___3. The inventory date must be added to the item record for each item inventoried.

__A___4. Inventory must also identify bar-coded items found on the shelves for which there are no item records in the database.

__A___5. It must be possible to load the inventory results obtained by using an optical scanner into the system and have them compared against the database and transaction file of the library (circulation records compared with shelf list and items found on the shelves).

I. Detention Center Library Requirements

At this time the Detention Center Library is not automated. There will be no bibliographic or patron records to convert. FCPL staff will add these manually after the system wide automation is complete. FCPL expects all software modules to have the same functionality as for the rest of the system except where FCPL has chosen to turn off functionality for this location. The requirements of this facility are noted below.

__A___1. Detention Center Inmates are not allowed access to the Internet. If the PAC for this location is Web based, access to anything but the PAC must be blocked.

__A___2. Items held at other locations must be blocked from this PAC (only items owned at this location must show in this PAC). Also, items held at this location must be blocked from the PAC for the rest of the system.

The Web Skin used at the Detention Center would be restricted to keyword searching only and restricted to the location code assigned to the detention center. Location restriction is not available with browse search at this time.

The highest level of restriction would come from placing this data into a separate database.

__A___3. The PAC must be icon or menu driven, use simple language, and be very user friendly and easy to use. Since many of the Detention Center inmates have low reading levels these factors are very important.

__A___4. FCPL must be able to create several levels of Circulation user log ons. Some with only the ability to check materials in and out with no access to the patron database, fines and fees owed, items checked out or other circulation information.

A___5. Patron barcodes used for this location can be different from barcodes used in the rest of the system.

__A___6. Reports of items checked out to a particular patron must be available to FCPL staff on a daily basis.

__A___7. The software used for this facility must be the same software used for the rest of FCPL and loaded on the server at the Headquarters Library at FCPL.

J. Community Information

FCPL currently has a Community Information database that is separate from our main catalog and database. The following requirements must be met by all vendors:

Virtua fully supports the MARC format for storing community information. This information may be stored in a separate database, as you have it now, or combined with the bibliographic database. Separate views are maintained and will be used when the software encounters a bib type of "q". A sample screen illustrating the construction of the community information view as been placed in: Part 3, Appendixes, Appendix 3.1, Screen Saves.

__A___1. The vendor must support USMARC Community Information format.

__A___2. All search, information and help screens must be customized to reflect Community Information. For example, a search option would be "organization" not "author."

__A___3. FCPL staff must be able to define display tags appropriate to community information. It must also be possible for FCPL to modify/customize Library-specified menus and displays without programmer or vendor intervention.

__A___4. FCPL must be able to choose which USMARC fields appear on any displays. For example, the call number field would not appear since it does not apply to Community Information. Instead the contact information field (#270) would be displayed.

__A___5. Vendors must support the 856 field. This field is used to provide links to the different organizations Web sites.

__A___6. If a Vendor proposes that the Community Information database be integrated with the main database their software **must** allow a library patron to search only the Community Information database.

It must be very easy for a patron to determine how to search the Community Information database. This could be accomplished by having Community Information as a separate menu choice, or a listed separately on the search options.

__A___7. Community Information records must be created, edited and deleted following the same capabilities and procedures as bibliographic records.

__D___8. It must be possible to date Community Information records (MARC field 501) and easily generate reports of records that need to be updated and/or verified. It must be possible to view these reports online or print them. If printed the reports should print one organization per page.

VTLS Inc., welcomes input from FCPL regarding community information reports which would be useful. The actual programming of a particular report generally takes only a few days. We are willing to discuss all desired reports for CI.

__A___9. The system must allow all or parts of the Community Information database to be printed, downloaded to disk or displayed. For example, it must be possible to print a list of all the Lions' Clubs with contact information.

__A___10. The system must be able to generate a report that prints the entire database, one record per page that is in a format appropriate for mailing to organizations for updating purposes.

__A___11. The system must allow FCPL to choose which USMARC Community Information fields will be included in a record.

__A___12. The Community Information database must be accessible through staff workstations and PACs.

__A___13. The system must be enable FCPL to control different levels of access to the database.

_A___14. The proposed system must enable authorized users to search the Community Information database by the name of the organization, subject headings, keyword, contact person, program/event and date file was last updated.

__A___15. The system must also enable authorized users to use Boolean operators for searching.

__A___16. It must be possible to search the Community Information database with the command structure used for accessing the online public access catalog and all other system modules.

K. Training

__A___1. The vendor must provide basic training in all functioning subsystems for the independent operation of the system, including regular maintenance and troubleshooting.

__A___2. The vendor must conduct all training on site. If this is not possible the vendor must specify where the training will be held and what additional costs are involved.

__A___3. The vendor must provide instructors and all necessary instructional materials that may be required for effective instruction and training.

__A___4. All training for all system functions must be hands-on.

__A___5. The vendor will provide a practice-training database. Any additional cost for this must be clearly stated in the Additional Costs section of the Systems Cost page.

__A___6. Complete system and applications documentation must be available at the time the system is installed. Software documentation must be provided in both hard copy (at least 2 copies) and machine-readable format.

__A___7. The vendor will provide training and instruction for all major system upgrades/revisions.

__A___8. The vendor must provide optional training for future FCPL authorized staff. Any additional cost for this training must be stated on the cost sheet.

__A___9. Documentation updates for all manuals must be provided on a regular basis as enhancements, upgrades and/or changes are made. These updates may be sent to FCPL in hard copy or made available via the Web.

Barcodes

FCPL uses 3 of 9 barcodes. They are 14 digit barcodes with the last digit being a check digit. We use barcodes with one (1) as the first digit for patrons and two (2), three (3), four (4) and six (6) as the first digit for materials. When we

migrated to VTLS in 1994 their system would only accept 10 digit barcodes where one (1) was the first digit of the barcode for materials and two (2) was the first digit for patrons. Since FCPL's barcodes did not meet either of these VTLS requirements they wrote a conversion program to allow our barcodes to work with their software. The conversion program changes our barcodes as follows:

Barcode Number	Converted Number
11982002221234 (patron)	2200222123
21982001114321 (materials)	1200111432
31982004443322 (materials)	1300444332

All materials and patrons currently in our database will have these converted numbers. Any successful vendor must be able to accept the full 14 digit barcodes when scanned into the system, but also link those 14 digit numbers to their converted numbers already in the system (stored as patron numbers in the patron database and numbers for items in the item database).

In addition we will also be automating our Detention Center Library when new software is purchased. The barcodes used for this system might be different from those used for the rest of the system. Any vendor software must be able to accept two different types of barcodes, one used only in the Detention Center Library and another used by the rest of FCPL.

Vendors must indicate if both of these conditions for barcodes are compatible with their software and list any additional costs due to these barcode differences in the Exceptions section on the Cost page.

__A___1. The proposed system can accept 14 digit barcodes scanned into the system and 10 digit barcodes stored as patron and item numbers.

__A___2. The system will accept two different types of barcodes used for FCPL, one for the Detention Center Library and another for the rest of the system.

ADD ALTERNATES

The modules covered in this section may or may not be included in any final contract. Vendors can bid on any or all of these modules, but each bid on a module in this section should be separate from the bid on the main section. A cost for each module in this section must be listed separately. FCPL reserves the right to purchase some, all or none of these modules.

I. Acquisitions and Fund Accounting

__A___1. The Acquisitions Module must be fully integrated with other system modules and must include purchase management, invoice management, fund accounting, reports generation, electronic ordering, canceling orders, reordering and claiming.

__A___2. Changes made from within the Acquisitions Module shall be reflected throughout the database.

__A___3. Each order record must be automatically and dynamically linked to a bibliographic record.

__A___4. Data stored in the acquisitions file shall include but not be limited to:

__A___	bibliographic information
__A___	acquisitions type (gift, approval, etc.)
__A___	status
__A___	Branch, copy, or fund information
__A___	invoice information
__A___	vendor information
__A___	accounting information
__A___	requestor
__A___	destination
__A___	instructions to vendor
__A___	internal processing instructions
__A___	estimated price
__A___	receiving information

__A___5. The system shall be capable of retaining all information online for a specified period not to exceed three years.

__A___6. The system must provide for all information that is no longer needed to be archived to magnetic media.

__A___7. The system shall accommodate the following acquisitions types:

__A___	prepaid	__A___	membership
__A___	gift	__A___	rental
__A___	lease	__A___	purchase

__A___8. The system shall accommodate the following order types:

__A___	approval plan	__A___	new order
__A___	pre-paid	__A___	added copy
__A___	standing order	__A___	subscription
__A___	membership	__A___	replacement
__A___	blanket order		

__AD___9. The system must automatically check for duplication based on any indexed field, including title key, at the library's discretion. Changing fields for duplicate detection must be a local choice not requiring vendor or programmer intervention.

__A___10. If a duplicate exists, a message must be displayed and the order temporarily held until authorized staff releases it.

__A___11. To facilitate order entry, a large amount of data must be 'defaulted' into a template so it is unnecessary to key the same information repeatedly. The vendor must state how many different templates the library has the option of establishing and maintaining.

__A___12. The system shall prohibit the assignment of duplicate order numbers.

__A___13. The system shall display the appropriate screen format and prompts for bibliographic information to be entered or copied from other lists.

__A___14. The system shall be capable of holding orders for later review and release by authorized staff.

__D___15. The system must be able to send orders electronically.

__A___16. The system shall be capable of loading vendor supplied MARC bibliographic data from various sources (e.g. FTP transfer, diskette, Z39.50 transfer).

__A___17. The system must allow for a variety of order statuses, including but not limited to:

__A___	on order	__A___	claimed
__A___	serial on order	__A__	cancelled

__A___ partially received

__A___18. It must be possible to generate reports for any status with specified date ranges.

__A___19. The acquisitions record shall contain a cumulative status information element to provide history of the order.

__A___20. The system shall be capable of accepting new bibliographic information about a title at any time after order placement or when its receipt is recorded.

__A___21. Each change to a fund must be recorded by the system and include the fund affected, change made, date of the change, and individual making the change.

__A___22. The fund file must include the amount budgeted, the amount encumbered, expenditures year-to-date, any uncommitted balance, and any adjustments. The system must also allow the creation of up to four levels of nested fund accounts.

___A__23. The fund file shall be updated automatically to indicate file encumbrances and debits as a result of actions on the acquisition file.

___A__24. During the encumbering operations, the system shall allow the operator to encumber automatically at a pre-determined vendor discount to create more accurate fund balances. For example, if the vendor normally allows at least 10% discount, than an operator keying in a $10.00 order for that vendor shall encumber $9.00.

__A___25. The fund file shall be updated online as transactions are posted. The system will also allow manual adjustments by authorized users.

__A___26. The system shall provide a warning alert of fund balances when the level of an encumbered fund reaches a library-specified value.

__A___27. The system must have the capability to print reports of fund accounts or display them online. These reports must be accessible from within the Acquisitions Module or from a series of Web-browser-based, point and click reports.

__A___28. The system shall report the number of items and titles received against a particular fund over a specified period of time.

__A___29. The system must have the capability to accommodate periods during which items are still being received against the previous year's appropriation, giving the library the option as to which year's appropriation to use.

__A___30. The system must be capable of calculating average annual costs for categories of materials by type and fund.

__A___31. Fund accounting must adhere to GAAP (generally accepted accounting practices).

__A___32. A formatted screen with appropriate prompts shall be provided for entry of vendor data.

__A___33. The vendor file shall include fields for vendor name, contact name, order address and remittance address, telephone and fax numbers, vendor account number, email address, and library-supplied number of days after which claims are made.

__AD___34. The system maintains in each vendor record a list of all the invoices that have been paid to that vendor, showing the invoice number and date, and the amount and date paid.

This is a report. This information is not maintained in the vendor record.

__A___35. On order information must automatically be updated when the item is received.

__A___36. The system should have the ability to automatically create item records for multiple copies during the receipt process.

__A___37. When receipt of an item is recorded and payment posted, the system shall automatically update all files, including vendor and financial files.

__A___38. The system shall be capable of handling receipt of items with invoices and items without invoices.

__A___39. The system shall accommodate credits, refunds, and partial order payment.

__A___40. An acquisitions record shall be accessible online through at least the purchase order number and date, main entry, title, subtitle, series title, conference title, keyword(s) in title, LC card number, ISSN/ISBN, and SuDocs number/GPO stock number.

___A __41. The system must allow an individual library to elect to automatically display the bibliographic record and the order record information (number of copies ordered, the collection ordered for, and the date) in the public catalog.

__A___42. The system shall permit the recording of holds against titles on order and in process.

__A___43. Staff must be able to search all on-order records before creating acquisition records from within the Acquisitions module.

__A___44. The system must allow separate copies of selections to be charged to different fund accounts.

__A___45. Staff must be able to order duplicates of materials already in a library's collection, on-order, or in process for a library.

__A___46. Any staff with the proper security privileges must be able to override in all accounts.

II. Children's Catalog

__A___1. The proposed system must have an icon-based PAC for children with sets of icon (photo or graphical) and preconfigured searches of interest to children developed by library professionals. The searches should have the following characteristics:

- __A___ performed on "live"data
- __A___ search results must be fully integrated with the library catalog and display full item information, including location and availability
- __A___ search results can be exported to a file, printed, saved to disk or sent to an email address
- __A___ patrons or staff can places holds on items displayed

__A___2. FCPL staff must be able to design custom pre-set searches to retrieve the best results for standard topics such as science projects, crafts, or specific holidays. Authorized staff must be able to assign appropriate icons to these FCPL designed searches and search results should have the same characteristics as listed in number 1 above.

__A___3. The display of specialized bibliographies, such as *Suggested Summer Reading*, must be permitted. Assignment of icons must

also be permitted for these specialized bibliographies and the search results should have the same criteria as other searches.

__A___4. The children's PAC must have full PAC capabilities and be fully integrated with other system modules and be accessible from all PAC and staff workstations.

__A___5. The system software must come with a full set of icons for this module. Additional icons must also be easily added by authorized staff without vendor or third party involvement.

__A___6. The system must index children's subject headings separately.

III. Meeting Room Booking

Virtua's Materials Booking, which includes equipment and meeting room scheduling is in active development. This subsystem is assigned to Virtua Build 40, which will be sent to Quality Control in October 2001.

We are willing to share the design specifications for the Materials Booking Subsystem outside the scope of our RFP response. Because RFP responses are generally made public documents, we need to protect our design document from our competition. If Frederick County is willing to exempt this document from public view, we will provide it.

VTLS Inc. is willing to offer FCPL a 50% discount on the Materials Booking line item to serve as a beta tester for this application. This can be discussed during contract negotiations.

___D__1. The system must enable authorized staff to book any FCPL meeting room to any user, subject only to policies established by FCPL.

__D___2. The proposed system must support a booking record including at least the following:

__D___user ID
__D___location or Branch Library
__D___date created
__D___date needed
__D___days needed
__D___date last booked
__D___equipment needed
__D___current bookings
__D___total bookings

__D___3. The system proposed must allow meeting rooms to be booked up to one year in advance.

__D___4. Before allowing staff to book a room, the system must check the calendar to ensure that the date is free.

__D___5. The system must allow a booking confirmation letter to be created and sent to the user.

__D___6. A calendar must be on the PAC so patrons can determine what dates meeting rooms are available and/or already booked.

__D___7. The system must allow authorized staff to cancel any booking at any time.

__D___8. The system must enable authorized staff to generate and print reports. These reports shall include:

__D___number of time each room was booked in a library s specified period of time
__D___ number of bookings that were cancelled
__D___ lists of selected or all users with bookings for any library specified period of time

IV. Enhanced Searching and Patron Tools

__A___1. The system should provide a single point from which patrons can do simple or complex searches. Multiple sources such as, the FCPL catalog, other Maryland public libraries, Internet search engines (e.g. Yahoo, Google), third party databases (e.g. Infotrac) will be available for searching. Patrons can choose where they want to search.

This functionality is currently available using the Virtua Web Gateway. Randy Whitson at University of Tennessee Chattanooga has designed web skins to performed the functions described above. To prevent FCPL from having to reinvent these skins, Randy will gladly allow his skins to be copied. To view Randy's skin: www.lib.utc.edu

__A___2. Patrons can elect to be notified when materials by their favorite author(s) have been ordered and/or received. The system will allow notification by email, print or telephone.

This is called Selective Dissemination of Information (SDI). Virtua allows a patron to store searches and define a notification schedule. If I am an avid Sue Grafton reader and want to be notified when the library receives new Sue Grafton titles, I simply

save an author search for Sue Grafton and the software will email the item information for newly received titles.

__A___3. From the FCPL PAC, patrons can search third party vendors (e.g. Amazon, Barnes & Noble) for materials and purchase them online.

__A___4. The system will provide patrons with information on all of the following:

__A___	a list of what others are reading
__A___	best seller lists
__A___	library announcements
__A___	book reviews
__A___	book jackets or covers
__A___	annotations for books and other materials
__A___	author biographical information

__D___5. The system will provide the ability for users to see more titles similar to the ones they have already retrieved.

__A___6. FCPL patrons will be able to set up a profile of his/her individual searching and interest preferences.

__A___7. The system will provide additional information about selected titles. This additional information should include, but is not limited to author biographies, book reviews, summaries, tables of contents and book covers.

__A___8. The system will be able to suggest additional topics or titles to users. This feature will be available to patrons with a single mouse click or keystroke.

__A___9. The source of any search results will be clearly displayed and attributed to the source.

__D___10. Search results should be rated according to relevancy.

PART THREE:

APPENDIXES

VTLS Inc.

APPENDIX 3.1

SAMPLE SCREENS

VTLS Inc.

11.2.5 Overdues Report

The Overdues report generates a list of overdue items that meet the location, patron type, and check-out type criteria set in the report configuration.

Below, in Figure 11-6, we show an example of HTML output from the Overdues report.

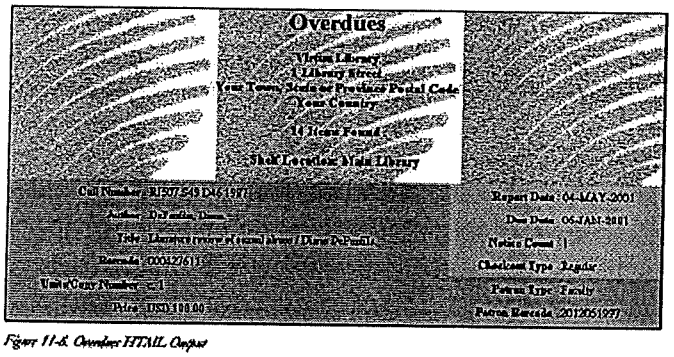


Figure 11-6. Overdues HTML Output

You can configure this report to generate a notice for the patrons who have overdue items checked out. The report uses the Notice Number to Generate parameter to generate the appropriate notice for each patron. For details on overdues, see the *Virtua Circulation Control User's Guide.*

11.2.5.1 General Characteristics of the Overdues Report

Default Report Group - Circulation.

Impact on Database - If you select the Update Database check box, when you run the report configuration, the notice count in the database is incremented to indicate that an overdue notice has been sent to the appropriate patrons.

Note: When testing configurations of the Overdues report, do NOT select the Update Database check box. For details, see the section "Update Database" in this chapter.

SAMPLE OVERDUE NOTICE

Virtua Library
1 Bookworm Lane
Reading, Virginia 12345
USA

Smith
smith@email.com

09-NOV-2000

No limit to text length

Dear Mr. Smith,

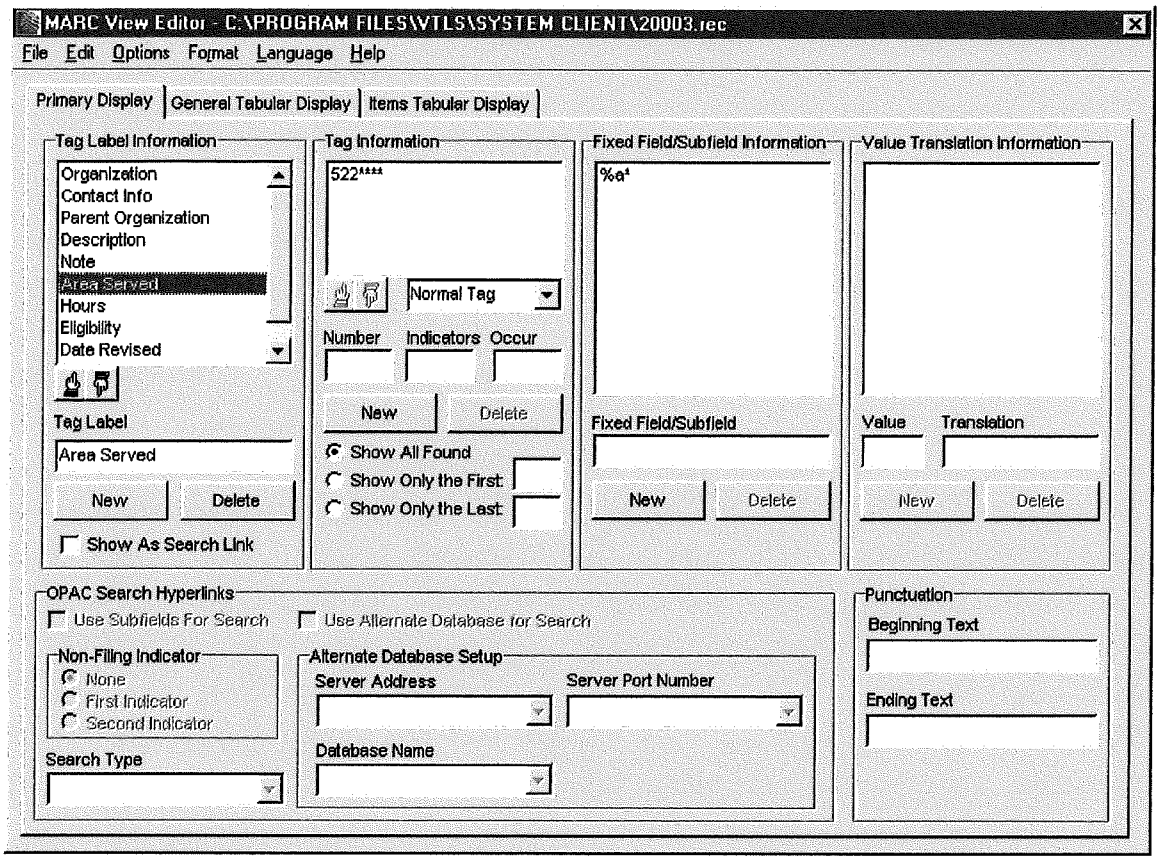
According to our records, the following 2 item(s) are overdue. Please return them as soon as possible. Fines and suspension of privileges may result if the materials are not returned in a timely manner. *

Thank you very much.

Author: Fox, Annette Baker, 1912-
Title: Canada in world affairs / Annette Baker Fox.
Call Number: F1034.2 .F69 1996 c. 1
Item Class: Government Documents 000441950
Price: USD 3.59
Due Date: 01-OCT-2000
Shelf Location: Main Library

Author: Fox, John, 1947-
Title: Applied regression analysis, linear models, and related methods / John Fox.
Call Number: HA31.3 .F69 1997 c. 1
Item Class: Government Documents 000448078
Price: USD 3.59
Due Date: 01-OCT-2000
Shelf Location: Main Library

If there is a mistake, please direct any inquiries to the Main Library Circulation Desk. *
Thank you very much. We appreciate your patronage.



Sample Screen: Defining View for Community Information Data

MARC Editor

Parent Organization

National Cancer Institute

Telephone

1 800-422-6237

Fax Number

540-557-2000

TDD Number

800-332-8615

Hours

Monday-Friday,9:00-4:30

Description - General Note

Service which provides immediate access to the latest information on cancer. This service serves as a central referral to community services and as a contact point for information about cancer research. Answer calls in english and spanish. Also mails printed material for free.

(q) Community information | (o) Organization

MARC21 Community: Community Information | Local File | Modified

community.rec

Sample Check Out Receipt

7/11/01, 2:48:04 PM

Checkout: Regular
4611
The romantic manifesto : a philosophy of l
iterature.
Due: 8/10/01 5:00:00 PM

Checkout: Regular
4612
Aesthetics and literary criticism / by R.B
. Patankar.
Due: 8/10/01 5:00:00 PM

Checkout: Regular
4613
Aesthetics of the novel / by Van Meter Ame
s.
Due: 8/10/01 5:00:00 PM

Checkout: Regular
4614
Art for art's sake / by Albert Guerard.
Due: 8/10/01 5:00:00 PM

Frederick County Public
Summer Hours: M-SN, 9AM-9PM
Fine Free Week This Week!

Sample Satisfied Request
(automatically produced during check-in process)

SATISFIED REQUEST
Author: Patankar, R. B., 1927-
Title: Aesthetics and literary criticism /
by R.B. Patankar.
PartsTitle:
Call Number: PN81 .P35
Units:
Copy Number: 1
Item Barcode: 4612
Loson Location: Cleveland
Patron Name: Johnson, Akeshia
Patron Barcode: 186
Patron Address:
114 Boardwalk Avenue
Techtown, VA 24680
Pickup Location: Cleveland
Checkin Date: 7/11/01
Restrictions:

Sample Fines/Fees Payment Receipt

7/11/01, 2:57:41 PM
Payment
Category: Damaged item
Item Number: 361141
Title: Shaver Robert A. Weinstein and Lar
ry Booth.
Adjustment: -$13.00
Balance: $27.00

APPENDIX 3.2

CONTRACTUAL DOCUMENTS

VTLS Inc.

VTLS Inc. SALES AGREEMENT

THIS SALES AGREEMENT [and Exhibits A through ___ referenced herein and annexed hereto (collectively the "Sales Agreement")]is made and entered into this ____ day of _____, 199__, (the "Effective Date") by and between **VTLS Inc.**, a Virginia corporation with its principal place of business at 1701 Kraft Drive, Blacksburg, Virginia 24060-6350, USA ("Seller") and _____, with its principal place of business at _____ ("Buyer").

WHEREAS, Seller desires to provide Buyer a turnkey installation of hardware, software, and services as a functional integrated library system ("System") to automate the library ("Library") of Buyer.

WHEREAS, Buyer desires to implement a functional integrated library system as a turnkey service.

WHEREAS, Seller owns the equipment and all attachments and accessions thereto and rights to sell software to be executable on the equipment listed and described on Exhibit A attached hereto and made a part hereof.

WHEREAS, Seller desires to provide to Buyer and Buyer desires to receive from Seller maintenance services relating to the equipment and such software.

NOW THEREFORE, in consideration of the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

W I T N E S S E T H:

1. **DEFINITIONS.** Certain words and phrases shall have the meanings attributed to them as follows:

1.1. "Hardware" means the computer and networking equipment designated on Exhibit A hereto, as Central Site Hardware, System Software, and Other Hardware.

1.2. "Software" means the computer programs designated in Exhibit A hereto as Application Software, in any medium.

1.3. "Services" means the consulting, installation, training and record processing designated in Exhibit A, not including Hardware and Software.

1.4. "Turnkey System" means the Hardware and Software which operate as an integrated system and Services designated on Exhibit A hereto.

1.5. "Installation" means an action where a VTLS Inc. assigned person or Buyer's employee assembles Hardware and/or Software to make it available for use.

1.6. "Delivery" means, when used in context of Hardware, Software or Services, the receipt of Hardware, Software or Services by Buyer.

2. **PURCHASE OF TURNKEY SYSTEM**

2.1 Conveyance of Hardware. Subject to the terms and conditions hereof, Seller sells, assigns, transfers, conveys and delivers to Buyer, and Buyer hereby purchases from Seller, the Hardware free and clear of all claims, liens and encumbrances.

2.2 Software Licenses. On or before signing this **Sales Agreement** the Seller and Buyer shall enter into a VTLS Inc. Software License Agreement, attached hereto as Exhibit B, and a VTLS Inc. Software Sublicense Agreement attached hereto as Exhibit C.

2.3 Maintenance Agreements. On or before signing this **Sales Agreement**, Seller and Buyer shall enter into a VTLS Inc. Software Maintenance and Enhancement Agreement, attached hereto as Exhibit D, a VTLS Inc. Third Party Software Maintenance and Support Agreement attached hereto as Exhibit E, and a VTLS Inc. Third Party Hardware Maintenance and Support Agreement attached hereto as Exhibit F.

2.3 Assignment of Warranties. To the extent that any manufacturers' warranties with respect to the Hardware and Software are assignable, Seller will assign all right, title and interest in said warranties to Buyer upon payment of applicable invoices for delivered Hardware and Software.

3. PAYMENT TERMS AND CONDITIONS

3.1 Payment Terms. All invoices shall be payable thirty (30) days after receipt of an invoice. A charge of one and one-half percent (1 1/2%) per month shall be paid on all overdue balances. Buyer agrees to pay VTLS Inc.'s actual attorneys' fees, costs and expenses of collection in the event VTLS Inc. retains counsel to collect any amount due under this Agreement.

3.2 Purchase Price. The total purchase price for the Turnkey System shall be $_____ (the "Purchase Price"). The Purchase Price shall be subject to adjustment if the components set forth in Exhibit A are changed. Any such changes require mutual consent of both parties and must be completed 60 days prior to the scheduled delivery date.

3.3 Payment Schedule. The Purchase Price shall be payable in the following manner: a) 25% of the Purchase Price upon signing; b) the remaining balance due (75%) on Hardware amounts shall be paid in full when delivered to VTLS Inc.; 65% of component costs shall be paid on delivery of component; d) and 10% of component costs shall be paid on acceptance of component in accordance with Section 3.4 below. For the purpose of payments, components and their values are defined in Exhibit A.

3.4 Acceptance Test. The acceptance tests shall consist of bibliographic record conversion, functional, full system, and response time checks as described in Appendix D of the VTLS Inc. Software License Agreement. Buyer shall begin the functional acceptance test no later than 30 days following installation, and for full system and response time no later than 60 days following installation. Buyer shall provide a written notification of a non-acceptance no later than 90 days from installation. Should VTLS Inc. not receive such written notification, the Turnkey System shall be deemed accepted no later than the 90th day after installation. Buyer shall promptly notify Seller in writing or by facsimile transmission if it determines that the system is failing any acceptance test and Seller shall take prompt action to remedy such failure.

3.5 Hardware support and maintenance fees. Hardware support and maintenance fees as described in Exhibit F to Sales Agreement shall accrue upon installation. First year's fees shall be payable following installation in accordance with Section 3.1 unless included in the Purchase Price. Second year's prorated fees and subsequent years' fees shall be payable annually in advance. The maintenance of the Hardware shall be contracted with VTLS Inc. Initial maintenance fees are governed by Exhibit A of this agreement.

3.6 Software support and maintenance. Software support and maintenance as described in Exhibits D and E to Sales Agreement shall accrue upon the expiration of the warranty period for each component as defined in Section 3.3. First year's fees shall be payable in accordance with Section 3.1. Second year's prorated fees and subsequent years' fees shall be payable annually in advance. Initial support and maintenance fees are governed by Exhibits D and E of this Agreement.

4. CANCELLATION OR RETURN POLICY

4.1 Replacement of purchased items. Seller and Buyer must mutually agree to any changes to the Turnkey System. In case Buyer requires a replacement to any Turnkey System line item before delivery, a cancellation fee of 20% of the contracted price and a new price for the replacing item will be due and payable in accordance with Section 3.

4.2 Cancellation. Cancellation of part of or entire Turnkey System before delivery for reasons other than for a breach of this Agreement by VTLS Inc. will result in a cancellation fee of 20% of the contracted price of the canceled item(s). The cancellation fee will be payable to VTLS Inc. in accordance with Section 3.1.

4.3 Return. Return of part of or entire Turnkey System, except Services, within 30 days of delivery for reasons other than a breach to this Sales Agreement by VTLS Inc. will result in a cancellation fee of 50% of the contracted price of the returned item(s). Returns after 30 days from delivery will not result in any refunds.

5. REPRESENTATIONS AND WARRANTIES

5.1 Representations and warranties of Seller. Seller represents and warrants to, and covenants and agrees with Buyer, as follows:

a. Integrity of Buyer's data imported into the Turnkey System shall be maintained as long as Buyer adheres to all operating procedures of the Turnkey System and maintains frequent database backups and transaction logging.

b. Neither the sale nor use of the Hardware and Software violates or infringes the patent, trademark, trade name, or other rights of any person.

c. On the date of delivery Seller owns, and by this Agreement conveys to Buyer, title to the Hardware, free and clear of any leases, liens, claims, and encumbrances arising out of actions by Seller.

d. Seller is duly and validly organized and existing in good standing under the laws of the Commonwealth of Virginia and has all necessary power and authority to own its properties and carry on its business in the jurisdictions where such properties are located and such business is conducted.

e. Seller has the power and authority to enter into this Sales Agreement and all other instruments and documents executed and delivered and/or received, or to be executed and delivered and/or received, in connection with the transactions herein referred to and to carry out the sale and transfer of the Turnkey System to Buyer and the transactions contemplated thereunder (collectively as Documents). There is no action, suit or proceeding pending against Seller before or by any court, administrative agency or other governmental authority which would materially impair the execution, delivery or performance by Seller of any Document to which Seller is a party. No approval of, or consent from, any governmental authority, person or entity not a party thereto is required for the execution, delivery or performance by Seller of any Document to which Seller is a party.

f. The execution and delivery by Seller of the Documents to which Seller is a party and the performance by it of its obligation thereunder, including, without limitation, the conveyance of the Turnkey System and acceptance of the Purchase Price in exchange therefore, have been duly authorized by all necessary action of Seller and do not violate or conflict with (i) any provisions of Seller's Articles of Incorporation or by-laws, (ii) any law or any order, writ, injunction, decree, rule or regulation of any court, administrative agency or other governmental authority, or (iii) other agreement to which Seller is a party or by which Seller is or may be bound.

g. The Documents to which Seller is a party, constitute, or when executed and delivered, will constitute, the valid and binding obligations of Seller enforceable in accordance with their respective terms.

h. Buyer shall deliver to Seller a sales tax exemption certificate at Seller's request.

I. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE WARRANTIES EXPRESSLY SET FORTH IN THIS SECTION 5. WITH THE EXCEPTION OF THE EXPRESS WARRANTY SET FORTH IN THIS SECTION 5, VTLS INC. DISCLAIMS ALL WARRANTIES REGARDING THIS SALE, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY IN REGARD TO QUALITY, PERFORMANCE, MERCHANTABILITY OR FITNESS OF THE SOFTWARE OR HARDWARE FOR A PARTICULAR PURPOSE.

5.2 Representations and Warranties of Buyer. Buyer represents and warrants to, and covenants and agrees with, the Seller as follows:

a. Buyer is a _____ institution duly and validly organized under the laws of _____ and has all necessary power and authority to own its properties and carry on its business where such properties are located and such business is conducted.

b. Buyer has the power and authority to enter into the Documents to which the Buyer is a party and to carry out the transactions contemplated thereunder. There is no action, suit or proceeding pending against Buyer before or by any court, administrative agency or other governmental authority which brings into question the validity of, or might in any way impair the execution, delivery or performance by Buyer of, any Document to which the Buyer is a party. No approval of, or consent from, any governmental authority, person or entity not a party thereto is required for the execution, delivery or performance by Buyer of any Documents.

c. The execution and delivery of the Documents by Buyer, and the performance of its obligations thereunder, have been duly authorized by all necessary action of Buyer and do not violate or conflict with (i) any law or any order, writ, injunction, decree, rule or regulation of any court, administrative agency or other governmental authority, or (ii)any other agreement to which Buyer is a party or by which Buyer may be bound.

d. The Documents to which the Buyer is a party constitute, or when executed and delivered will constitute, the valid and binding obligations of Buyer enforceable in accordance with their respective terms.

6. INDEMNIFICATION

6.1 Seller's Indemnification. Seller will indemnify Buyer and protect, defend and hold it harmless from and against, any and all loss, cost, damage, injury or expense, wheresoever and howsoever arising which Buyer may incur by reason of any breach by Seller of any of the representations by, or

obligations of, Seller set forth in the Documents; provided that the aggregate amount of Seller's liability under this Section 6.1 shall not exceed the Purchase Price set forth in Section 3.2 above. In the event any claim for indemnification hereunder arises on account of a claim or action made or instituted by a third party, or entity, against Buyer, Buyer shall notify Seller promptly after the receipt of notice by Buyer that such claim has been made or that such action has been commenced. Seller shall maintain the sole defense of such claim or action at it's own cost and by counsel of its own choosing.

6.2 Buyer's Indemnification. Buyer will indemnify Seller and protect, defend and hold it harmless from and against any and all loss, cost, damage, injury or expense, wheresoever and howsoever arising which Seller or its subsidiaries or stockholders, or any of its, or their, directors, officers, agents, employees, or stockholders, may incur by reason of any breach by Buyer of any of the representations by, or obligations of, Buyer set forth in the Documents; provided that the aggregate amount of Buyer's liability under this Section 6.2 shall not exceed the Purchase Price set forth in Section 3.2 above. In the event any claim for indemnification hereunder arises on account of a claim or action made or instituted by a third person against Seller, Seller shall notify Buyer promptly after the receipt of notice by Seller that such claim has been made or that such action has been commenced. Buyer shall maintain the sole defense of such claim or action at it's own cost and by counsel of its own choosing.

7. DEFAULT AND TERMINATION. The following shall constitute an event of default:

7.1. Buyer's failure to make any payment hereunder within thirty (30) days after the due date of such payment.

7.2. The failure by either party to perform any obligation hereunder within sixty (60) days after written notice of such failure from the other party or, if the failure cannot be cured within such sixty (60) day period, then the failure to commence immediately and proceed diligently to perform such obligation.

Upon the occurrence of an event of default, the nondefaulting party may terminate this Sales Agreement by notice to the defaulting party, such termination to take effect upon receipt, and pursue any and all other remedies available at law or in equity.

8. FORCE MAJEURE. With the exception of the Buyer's failure to make any payment required herein when due, if the performance of this Sales Agreement is prevented or interfered with by reason of any circumstances beyond the reasonable control of a party hereto, such party shall be excused from such performance for the duration of the force majeure, provided that the party so affected shall use reasonable efforts to remove the force majeure.

9. ENTIRE AGREEMENT. This document constitutes the entire understanding of the parties with respect to the matters set forth herein and supersedes all prior written and oral understandings between the parties with respect thereto.

10. ASSIGNMENT. VTLS Inc. shall have the absolute right to assign all of its rights and duties hereunder to any other party who, in its sole judgment, shall be financially and technically qualified to carry out its duties hereunder.

11. GOVERNING LAW. This Agreement shall be governed by, construed and enforced in accordance with the laws of the Commonwealth of Virginia, USA, without regard to the principles of conflicts of laws of any jurisdiction.

12. LIMITATION OF ACTIONS; JURISDICTION. With the exception of an action or suit for the Buyer's failure to make any payment required hereunder when due, no suit or action arising under

this Agreement may be brought more than one (1) year following the occurrence giving rise thereto. All suits and actions arising under this Sales Agreement shall be brought in the Commonwealth of Virginia, and Buyer hereby submits to the jurisdiction of the courts of the Commonwealth of Virginia and the United States District Courts sitting in Virginia.

13. SEVERABILITY. If any provision of this Agreement shall be determined to be void, invalid, unenforceable, or illegal for any reason, the validity and enforceability of all of the remaining provisions hereof shall not be affected thereby.

14. FAILURE TO EXERCISE RIGHTS; WAIVER. The failure of either party to exercise any of its rights under this Sales Agreement for a breach thereof shall not be deemed to be a waiver of such rights nor shall the same be deemed to be a waiver of any subsequent breach. No term or provision hereof shall be deemed waived and no breach excused unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented.

15. HEADINGS. The headings of the sections hereof are for convenience only and do not in any way limit or amplify the terms and conditions of this Sales Agreement.

16. TAXES. Buyer shall pay all sales, use, value added taxes (VAT), transfer or other taxes, whether federal, state or local, however designated, which are levied or imposed by reason of the transaction contemplated hereby; excluding, however, income taxes on profits which may be levied against VTLS Inc. Buyer shall reimburse VTLS Inc. for the amount of any such taxes paid or accrued by VTLS Inc. as a result of this transaction.

17. NOTICES AND CHANGES. Any notice or other communication hereunder shall be in writing and sent to the principal address of the party set forth in the introductory section of this Sales Agreement. Notice is effective when received. No change to any provision hereof (including any Exhibit hereto) shall be effective unless stated in writing and signed by both parties hereto.

18. INDEPENDENT CONTRACTOR. It is expressly understood that VTLS Inc. and Buyer are contractors independent of one another, and that neither has the authority to bind the other to any third person or otherwise to act in any way as the representative of the other, unless otherwise expressly agreed to in a writing signed by both parties hereto.

19. CONSTRUCTION OF AGREEMENT. The provisions of this Sales Agreement were negotiated in all respects by the parties hereto. This Sales Agreement shall not be construed against the drafter hereof.

WITNESS the following signatures and seals:

Buyer: _____	**VTLS Inc.:**
By: _____	By: _____

Its	_____	Its	_____
(Date)	_____	(Date)	_____

EXHIBIT A TO
VTLS INC. SALES AGREEMENT

THIS EXHIBIT A is attached to the VTLS Inc. SALES AGREEMENT dated the _____ day of _____, 19____, between **VTLS Inc.** and _____, and is incorporated therein.

FOR PURPOSES OF THIS AGREEMENT, "Turnkey System" means the computer equipment and programs, and services listed in the VTLS System Quotation dated _____ attached.

EXHIBIT B TO
VTLS INC. SALES AGREEMENT

THIS EXHIBIT B is attached to the VTLS Inc. SALES AGREEMENT dated the _____ day of _____, 19____, between **VTLS Inc.** and _____, and is incorporated therein.

FOR PURPOSES OF THIS AGREEMENT, the VTLS Inc. Software License Agreement is attached.

EXHIBIT C TO
VTLS INC. SALES AGREEMENT

THIS EXHIBIT C is attached to the VTLS Inc. SALES AGREEMENT dated the _____ day of _____, 19____, between **VTLS Inc.** and _____, and is incorporated therein.

FOR PURPOSES OF THIS AGREEMENT, the VTLS Inc. Software Sublicense Agreement is attached.

EXHIBIT D TO
VTLS INC. SALES AGREEMENT

THIS EXHIBIT D is attached to the VTLS Inc. SALES AGREEMENT dated the _____ day of _____, 19____, between **VTLS Inc.** and _____, and is incorporated therein.

FOR PURPOSES OF THIS AGREEMENT, the VTLS Inc. Maintenance and Enhancement Agreement is attached.

EXHIBIT E TO
VTLS INC. SALES AGREEMENT

THIS EXHIBIT E is attached to the VTLS Inc. SALES AGREEMENT dated the _____ day of _____, 19____, between **VTLS Inc.** and _____, and is incorporated therein.

FOR PURPOSES OF THIS AGREEMENT, the VTLS Inc. Third Party Software Maintenance and Support Agreement is attached.

EXHIBIT F TO
VTLS INC. SALES AGREEMENT

THIS EXHIBIT F is attached to the VTLS Inc. SALES AGREEMENT dated the _____ day of _____, 19____, between **VTLS Inc.** and _____, and is incorporated therein.

FOR PURPOSES OF THIS AGREEMENT, the VTLS Inc. Third Party Hardware Maintenance and Support Agreement is attached.

EXHIBIT G TO
VTLS INC. SALES AGREEMENT

THIS EXHIBIT G is attached to the VTLS Inc. SALES AGREEMENT dated the _____ day of _____, 19____, between **VTLS Inc.** and _____, and is incorporated therein.

FOR PURPOSES OF THIS AGREEMENT, the _____ is attached.

VTLS Inc. Software License Agreement

THIS SOFTWARE LICENSE AGREEMENT and Appendices A through ___ referenced herein and annexed hereto (collectively, the "Agreement" or "License") is made and entered into this _____ day of _____, 2000, (the "Effective Date") by and between **VTLS Inc.,** a Virginia corporation with its principal place of business at 1701 Kraft Drive, Blacksburg, Virginia 24060-6350, USA and _____, with its principal place of business at _____ ("Licensee").

In consideration of the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

W I T N E S S E T H:

1. DEFINITIONS. Certain words and phrases shall have the meanings attributed to them as follows:

1.1. "Licensed Software" means the computer programs designated in Appendix A hereto, in any medium.

1.2. "Designated Hardware" means the host computer(s) designated on Appendix B hereto or such other computer hardware as mutually agreed upon by VTLS Inc. and Licensee in writing.

1.3. "VTLS Inc." means VTLS Inc., a Virginia corporation, its successors and assigns.

A reference to a person shall be deemed to include references to a corporation, institution, company, partnership, unincorporated association, federal, state or local government agency and/or other statutory body.

2. GRANT OF LICENSE. VTLS Inc. hereby grants Licensee a nonexclusive, nontransferable license, during the Term of this Agreement (as hereinafter defined), to execute the Licensed Software on the Designated Hardware solely for the Licensee's internal purposes.

2.1. Licensee may execute the Licensed Software on computer hardware other than the Designated Hardware only if such use takes place at the same location as the Designated Hardware and Licensee is unable to use the Designated Hardware due to scheduled maintenance or malfunction of the Designated Hardware.

2.2. Licensed Software which is designated for workstations may be executed and utilized on any workstation but limited to the total number of workstations to which copies of the Licensed Software are licensed in Appendix A.

2.3. The foregoing license includes the right to make one copy of the Licensed Software, in nonprinted, machine-readable form, solely for backup and archival purposes, provided that the copy shall include and incorporate VTLS Inc.'s copyright and proprietary rights notices for the Licensed Software.

2.4 VTLS Inc. shall provide Licensee with training, services, and documentation in connection with the Licensed Software as described and at the cost set forth in Appendix C.

3. LICENSEES THAT ARE UNITS OR AGENCIES OF THE U.S. OR STATE GOVERNMENTS. The provisions of paragraphs 3.1, 3.2, 3.3, 3.4 and 3.5 apply to Licensees that are units or agencies of the U.S. or State Government or when a Licensee makes the Licensed Software available to a unit or agency of the U.S. or State Government.

3.1 **The Licensed Software is VTLS Inc.'s Confidential Property, a Trade Secret, and Subject to VTLS Inc.'s Copyright.** The Licensed Software was developed entirely at private expense and in all respects is proprietary data belonging solely to VTLS Inc. and all rights thereto are reserved to VTLS Inc. under the copyright laws of the United States. The Licensed Software is a trade secret of VTLS Inc. and exempt from release under the Freedom of Information Act, 5 U.S.C. § 552 et seq., and under any applicable state freedom of information acts. Licensee covenants and agrees to immediately notify VTLS Inc. in writing upon Licensee's receipt of any request that may result in the disclosure of the Licensed Software to a party not bound by this Agreement.

3.2 **Restrictions on Rights of Government Users of the Licensed Software.** As the Licensed Software was developed entirely at private expense, it constitutes "Commercial Computer Software," as that term is defined in the Federal Acquisition Regulations (FAR). If the Licensed Software is to be provided to any agency or entity of the U.S. Government, it shall only be provided to the agency or entity with the rights specified in the standard commercial license specified by VTLS Inc., or, with the prior written authorization of VTLS Inc., with "Restricted Rights" as set forth in FAR 52.227-19, ("Commercial Computer Software - Restricted Rights") (June 1987) and any associated "technical data" shall only be provided with "Restricted Rights" as that term is defined in FAR 52.227-14 (June 1987). If the agency or entity of the U.S. Government is subject to the Department of Defense Federal Acquisition Regulation Supplement (DFARS) then, in accordance with DFARS § 227.7202-1 ("Commercial Computer Software and Commercial Computer Software Documentation"), the Licensed Software can only be provided to the agency or entity with the rights specified in the VTLS Inc. standard commercial license.

3.3 The Licensed Software can only be provided to state or local government agencies or entities with the rights specified in the VTLS Inc. standard commercial license specified by VTLS Inc.

3.4 The Licensee is obligated hereunder to take all steps necessary, including but not limited to those required under the FAR and DFARS, to ensure that the Licensed Software is identified as "Commercial Computer Software" and is provided to the U.S. Government, or to any other governmental entity, in strict compliance with this provision. Any breach of this provision is a material breach of this Agreement.

3.5 Licensee waives the defense of sovereign immunity to any claim of VTLS Inc. arising from or relating to this Agreement.

4. SUPPLEMENTAL SOFTWARE. Licensee agrees that any supplemental software delivered to Licensee by VTLS Inc. (including upgrades to Licensed Software) subsequent to the initial delivery of the Licensed Software under this Agreement shall also be deemed Licensed Software, and thus are subject to all terms and conditions of this Agreement.

5. PAYMENT TERMS AND CONDITIONS. In consideration of the License granted hereunder, Licensee agrees to pay VTLS Inc. the Initial License Fee(s) specified in Appendix A and invoiced in accordance with the payment schedule in Appendix D.

5.1. Initial License Fee(s) and all fees for VTLS Inc. services shall be due thirty (30) days after receipt of a VTLS Inc. invoice.

5.2. License Renewal Fees (as hereinafter defined) are hereby waived for the License Renewal Periods (as hereinafter defined), provided a VTLS Inc. Software Maintenance and Enhancement Agreement ("Maintenance Agreement") is in force, and all fees due under the Maintenance Agreement are remitted to VTLS Inc. in a timely manner. Otherwise, License Renewal Fees, in the amount of five percent (5%) of the Initial License Fee(s) specified in Appendix A, shall be payable in full at the beginning of each License Renewal Period.

5.3. All payments shall be made within thirty (30) days of receipt of an invoice. Licensee agrees to pay VTLS Inc. a charge of one and one-half percent (1 ½%) per month on all overdue balances. Licensee agrees to pay VTLS Inc.'s actual attorneys' fees, costs and expenses of collection in the event VTLS Inc. retains counsel to collect any amount due under this Agreement.

6. OWNERSHIP. Licensee acknowledges and agrees that this Agreement is a nonexclusive, nontransferable license only and does not constitute a sale or transfer of title to the Licensed Software. VTLS Inc. retains all ownership and proprietary rights in and to the Licensed Software and all software products derived from the Licensed Software. Licensee further acknowledges and agrees that the Licensed Software is proprietary to VTLS Inc., whether or not any portion of it may be protected by patent or copyright.

7. WARRANTIES. VTLS Inc. represents and warrants that it has the full right and authority to enter into this Agreement and to grant the license set forth in Section 2 hereof and that the Licensed Software, when delivered, shall be substantially free from material defects in materials and workmanship. If Licensee informs VTLS Inc. within ninety (90) days of delivery that any Licensed Software delivered and licensed hereunder is materially defective in materials or workmanship, and if VTLS Inc. confirms this to be correct, VTLS Inc. shall, at its option, replace the medium on which such Licensed Software is contained or refund to Licensee the Initial License Fee with respect to such Licensed Software. This shall be Licensee's sole remedy for breach of the foregoing warranty.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE WARRANTIES EXPRESSLY SET FORTH IN THIS SECTION 7. WITH THE EXCEPTION OF THE EXPRESS WARRANTY SET FORTH IN THIS SECTION 7, VTLS INC. DISCLAIMS ALL WARRANTIES REGARDING THE LICENSED SOFTWARE, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY IN REGARD TO QUALITY, PERFORMANCE, MERCHANTABILITY OR FITNESS OF THE LICENSED SOFTWARE FOR A PARTICULAR PURPOSE.

8. INDEMNIFICATION OF LICENSEE.

8.1. Notice of Claim. Licensee agrees to notify VTLS Inc. of any claim, action or suit against Licensee alleging that the Licensed Software infringes any United States patent, copyright, trade secrets or other proprietary ownership right of a third party.

8.2. Indemnification. During the Term of this Agreement, VTLS Inc. agrees to indemnify and hold Licensee harmless against any loss, damage or liability incurred by Licensee arising out of any claim that the Licensed Software infringes a United States patent or copyright or constitutes misappropriation of a trade secret or other proprietary right of a third party; provided, however, that the indemnification provided hereunder is contingent upon the: (1) Licensee notifying VTLS Inc. promptly in writing that a claim is threatened or has been brought, (2) Licensee granting VTLS Inc. the right to assume the defense of such claim, with counsel selected by VTLS Inc., and (3) Licensee's reasonable cooperation with VTLS Inc. in defense of such claim.

8.3. Remedies. If Licensee's continued use of any of the Licensed Software is permanently enjoined so that Licensee's use of the Licensed Software is substantially impaired,

VTLS Inc. shall use its reasonable best efforts to (1) obtain for Licensee the right to continue using such Licensed Software, (2) modify such Licensed Software so it is not subject to the injunction and is functionally equivalent to the original, or (3) substitute other Licensed Software that is not subject to the injunction and is functionally equivalent to the original. If none of the above options is reasonably available to VTLS Inc., Licensee or VTLS Inc. may terminate this Agreement with respect to such Licensed Software, and VTLS Inc. shall promptly refund the Initial License Fee with respect to such Licensed Software.

8.4. Unauthorized Changes. VTLS Inc. shall have no liability for any claim, action or suit alleging that any Licensed Software infringes a United States patent or copyright or constitutes misappropriation of a trade secret or other proprietary right of a third party if such claim arises from any change, modification or alteration to the Licensed Software which is not made or authorized in writing by VTLS Inc.

9. LIMITATION OF LIABILITY AND INDEMNIFICATION BY LICENSEE. VTLS Inc. shall not be liable for any indirect, special, incidental, consequential, punitive or exemplary damages resulting from the breach of this Agreement, the use or operation of any Licensed Software, or from any defects or errors of any kind in the Licensed Software, or from any action or inaction by VTLS Inc., whether such claim is based in contract or in tort. Notwithstanding any other provision of this Agreement, VTLS Inc.'s liability to Licensee under any theory shall not exceed the Initial License Fee(s) paid by Licensee hereunder. Licensee shall indemnify and hold VTLS Inc. harmless against any and all losses, damages or claims relating in any way to the content, accuracy, completeness or performance of Licensee's own computer programs or data. The provisions of this Section 9 shall survive the termination, cancellation or expiration of this Agreement for any reason.

10. MODIFICATION OF SOFTWARE IS PROHIBITED. Licensee shall not modify reverse engineer, recompile, or decompile the Licensed Software. Further, Licensee shall not make modifications to or alter the performance of any portions of the Licensed Software that produce displays of or contain references to or otherwise identify by name the Licensed Software or its copyright or VTLS Inc., examples being, by way of illustration and not by way of limitation, "VTLS", "VIRTUA", "Micro-VTLS" , or "VTLS InfoStation." Any unauthorized modifications to the Licensed Software shall be proprietary to VTLS Inc. and shall remain subject to all other provisions of this agreement.

11. CONFIDENTIALITY. Licensee agrees that it will not reveal or disclose to any other person the Licensed Software, or any details, contents, programs or any other proprietary information whatsoever concerning the Licensed Software, except to persons who require such information in the exercise of Licensee's license(s) hereunder. Licensee further agrees that it will secure from such persons, and any other persons who have access to the Licensed Software pursuant to this Agreement, whether Licensee's employees or not, an executed confidentiality agreement. Licensee's confidentiality obligations hereunder shall survive the expiration or earlier termination of this Agreement.

12. TERM. This Agreement shall continue in full force and effect from the Effective Date until December 31 of the then calendar year, and shall automatically renew for additional one (1) year periods ("License Renewal Period(s)") unless terminated by Licensee by the giving of written notice to VTLS Inc. on or before ninety (90) days prior to the end of the License Renewal Period; or unless this Agreement is earlier terminated pursuant to the provisions of Section 13, hereof.

13. DEFAULT AND TERMINATION. The following shall constitute an event of default:

13.1. Licensee's failure to make any payment hereunder within thirty (30) days after the due date of such payment.

13.2. The failure by either party to perform any obligation hereunder within sixty (60) days after receipt of written notice of such failure from the other party or, if the failure cannot be cured within such sixty (60) day period, then the failure to commence immediately and proceed diligently to perform such obligation within sixty (60) days of receipt of written notice.

Upon the occurrence of an event of default, the nondefaulting party may terminate this Agreement by giving written notice to the defaulting party, such termination to take effect upon receipt, and pursue any and all other remedies available at law or in equity. Within thirty (30) days after the termination or expiration of this Agreement, Licensee shall destroy or return to VTLS Inc. the Licensed Software (and all copies thereof), and an officer of Licensee shall certify in writing to VTLS Inc. that such action has been taken.

14. FORCE MAJEURE. With the exception of the Licensee's failure to make any payment required hereunder when due, if the performance of this Agreement is prevented or interfered with by reason of any circumstances beyond the reasonable control of a party hereto, such party shall be excused from such performance for the duration of the force majeure, provided that the party so affected shall use reasonable efforts to remove the force majeure.

15. ENTIRE AGREEMENT. This document constitutes the entire understanding of the parties with respect to the matters set forth herein and supersedes all prior written and oral understandings between the parties with respect thereto.

16. ASSIGNMENT. VTLS Inc. shall have the absolute right to assign all of its rights and duties hereunder to any other party who, in its sole judgment, shall be financially and technically qualified to carry out its duties hereunder.

17. GOVERNING LAW. This Agreement shall be governed by, construed and enforced in accordance with the laws of the Commonwealth of Virginia, USA, without regard to the principles of conflicts of laws of any jurisdiction.

18. LIMITATION OF ACTIONS; JURISDICTION. With the exception of an action or suit for the Licensee's failure to make any payment required hereunder when due, no suit or action arising under this Agreement may be brought more than one (1) year following the occurrence giving rise thereto. All suits and actions arising under this Agreement shall be brought in the Commonwealth of Virginia, and Licensee hereby submits to the jurisdiction of the courts of the Commonwealth of Virginia and the United States District Courts sitting in Virginia.

19. SEVERABILITY. If any provision of this Agreement shall be determined to be void, invalid, unenforceable or illegal for any reason, the validity and enforceability of all of the remaining provisions hereof shall not be affected thereby.

20. FAILURE TO EXERCISE RIGHTS; WAIVER. The failure of either party to exercise any of its rights under this Agreement for a breach thereof shall not be deemed to be a waiver of such rights nor shall the same be deemed to be a waiver of any subsequent breach. No term or provision hereof shall be deemed waived and no breach excused unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented.

21. HEADINGS. The headings of the sections hereof are for convenience only and do not in any way limit or amplify the terms and conditions of this Agreement.

22. TAXES. Licensee shall pay all sales, use, value added taxes (VAT), transfer or other taxes, whether federal, state or local, however designated, which are levied or imposed by reason of the transaction contemplated hereby; excluding, however, income taxes on profits which may be levied against VTLS Inc. Licensee shall reimburse VTLS Inc. for the amount of any such taxes paid or accrued by VTLS Inc. as a result of this transaction.

23. NOTICES AND CHANGES. Any notice or other communication hereunder shall be in writing and sent to the principal address of the party set forth in the introductory section of this Agreement. Notice is effective when received. No change to any provision hereof shall be effective unless stated in writing and signed by both parties hereto.

24. INDEPENDENT CONTRACTOR. It is expressly understood that VTLS Inc. and Licensee are contractors independent of one another, and that neither has the authority to bind the other to any third person or otherwise to act in any way as the representative of the other, unless otherwise expressly agreed to in a writing signed by both parties hereto.

25. CONSTRUCTION OF AGREEMENT. The provisions of this Agreement were negotiated in all respects by the parties hereto. This Agreement shall not be construed against the drafter hereof.

WITNESS the following signatures and seals:

Licensee:	**VTLS Inc.**
By: _____	**By:** _____
Its _____	**Its** _____
(Date) _____	**(Date)** _____

APPENDIX A TO
VTLS Inc. SOFTWARE LICENSE AGREEMENT

THIS APPENDIX A is attached to the VTLS Inc. SOFTWARE LICENSE AGREEMENT ("Agreement") dated the _____ day of _____, 2000, between VTLS Inc. and _____ ("Licensee"), and is incorporated therein.

FOR PURPOSES OF THE AGREEMENT, "Licensed Software" and "Initial License Fee(s)" mean the computer programs and license fees identified below:

Qty.	Licensed Software	
_____	VIRTUA Level: User License: Initial License Fee:	$
_____	VIRTUA Level: Initial License Fee:	$
_____	VIRTUA Initial License Fee:	$
_____	VIRTUA Initial License Fee:	$
_____	VIRTUA Initial License Fee:	$
_____	VIRTUA Initial License Fee:	$
_____	VIRTUA Initial License Fee:	$
	Total Initial Fee:	

The Initial License Fees set forth herein are firm at the time of contract signing. Future fees are subject to change at the sole discretion of VTLS Inc.

Licensed Software is licensed based on the number of simultaneous users and optional subsystems. Licensed Software can be upgraded to accommodate more simultaneous users and additional subsystems. Upgrade cost for additional users is determined as the difference between the list price of the new and existing levels at the time of purchase. New subsystems are licensed at standard list prices at the time of purchase.

APPENDIX B TO
VTLS Inc. SOFTWARE LICENSE AGREEMENT

THIS APPENDIX B is attached to the VTLS Inc. SOFTWARE LICENSE AGREEMENT ("Agreement") dated the _____ day of _____, 2000, between VTLS Inc. and _____ ("Licensee"), and is incorporated therein.

1. DESIGNATED HARDWARE AND LOCATION(S) All Designated Hardware on which Licensed Software (excluding workstation software) shall be identified herein as to serial number, make and model number, and location. Written notification of any change in the location, make and model number, or serial number of any Designated Hardware must be provided by Licensee to VTLS Inc. within thirty (30) days of such change.

2. USE OF LICENSED SOFTWARE

2.1. All Licensed Software (excluding workstation software) shall be used by Licensee only on the host computer(s) with the serial number and at the location designated below:

_____ (Institution)

_____ (Street Address)

_____ (City, State/Province)

_____ (Postal Code, Country)

_____ (Computer Make & Model)

_____ (Serial Number)

2.2. If more than one VIRTUA database account license is granted herein, the database account is identified as follows:

1. Account CLAS01 (Software Storage)

2. Account CLAS99 (Test & Train)

3. _____

4. _____

5. _____

2.3. Licensed Software which is designated for workstations may be executed and utilized on any workstation but limited to the total number of workstations to which copies of the Licensed Software is licensed in Appendix A.

APPENDIX C TO
VTLS Inc. SOFTWARE LICENSE AGREEMENT
VTLS SERVICES

THIS APPENDIX C is attached to the VTLS Inc. SOFTWARE LICENSE AGREEMENT ("Agreement") dated the _____ day of _____, 2000, between VTLS Inc. and _____ ("Licensee"), and is incorporated therein.

1. **VTLS TRAINING.** VTLS Inc. will provide Licensee the following training in connection with the use of the Licensed Software as summarized below.

Qty. _____ VTLS Phase I Training
Initial: $_____

Qty. _____ VTLS Phase II Training
Initial: $_____

Qty. _____ VTLS Phase III Training
Initial: $_____

2. **RECORD CONVERSION.** VTLS Inc. will provide Licensee the following record loading and conversion services as summarized below

Qty. _____ VTLS Record Loading
Load Setup Fee (Required for Each Record Type)
Initial: $_____

Qty. _____ VTLS Record Loading
Per Record Cost
Initial: $_____

3. **DOCUMENTATION.** VTLS Inc. will provide Licensee the following documentation in connection with the use of the Licensed Software as summarized below

Qty. _____ VTLS Documentation
Initial: $_____

4. **OTHER VTLS SERVICES.** VTLS Inc. will provide Licensee the following services with the use of the Licensed Software as summarized below.

Qty. _____ Service
Initial: $_____

Total: $

APPENDIX D TO
VTLS Inc. SOFTWARE LICENSE AGREEMENT
PAYMENT SCHEDULE

THIS APPENDIX D is attached to the VTLS Inc. SOFTWARE LICENSE AGREEMENT ("Agreement") dated the _____ day of _____, 2000, between VTLS Inc. and _____ ("Licensee"), and is incorporated therein.

1. Payment for VTLS Software
   1.1. 25% on acceptance of order
   1.2. 75% on delivery
2. Payment for hardware and Operating systems
   2.1. 25% on acceptance of order
   2.2. 75% on delivery
3. Payment for third party infra-structure software – Oracle, Fulcrum, Micro-Focus COBOL
   3.1. 25% on acceptance of order
   3.2. 75% on delivery
4. Payment for third party application software – MAPCAT, ILL etc.
   4.1. 25% on acceptance of order
   4.2. 75% on delivery
5. Payment for Consulting and Training
   5.1. 25% on acceptance of order
   5.2. 75% on delivery
6. Payment on Record Conversions
   6.1. 100% of the record processing set-up fee due on acceptance of order
   6.2. 90% of the record loading fees due on delivery of converted records
   6.3. 10% of the record loading fees due on acceptance of converted records

VTLS Inc. Software Sublicense Agreement

THIS SOFTWARE SUBLICENSE AGREEMENT [and Appendices A and B referenced herein and annexed hereto (collectively, the "Agreement" or "Sublicense")] is made and entered into this _____ day of _____, 199_, (the "Effective Date") by and between **VTLS Inc.,** a Virginia corporation with its principal place of business at 1701 Kraft Drive, Blacksburg, Virginia 24060-6350, USA and _____, with its principal place of business at _____ ("Sublicensee").

In consideration of the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

W I T N E S S E T H:

1. DEFINITIONS. Certain words and phrases shall have the meanings attributed to them as follows:

1.1. "Sublicensed Software" means the computer programs designated in Appendix A hereto, in any medium.

1.2. "Designated Hardware" means the host computer(s) designated on Appendix B hereto or such other computer hardware as mutually agreed upon by VTLS Inc. and Sublicensee in writing.

1.3. "VTLS Inc." means VTLS Inc., a Virginia corporation, its successors and assigns.

1.4. "System" means the Designated Hardware and Sublicensed Software.

1.5. "Licensor(s)" means each Licensor listed on Appendix A of this Software Sublicense Agreement.

A reference to a person shall be deemed to include references to a corporation, institution, company, partnership, unincorporated association, federal, state or local government agency and/or other statutory body.

2. GRANT OF SUBLICENSE. VTLS Inc. hereby grants Sublicensee a nonexclusive, nontransferable license, during the Term of this Agreement (as hereinafter defined), to execute the Sublicensed Software on the Designated Hardware solely for the Sublicensee's internal purposes.

2.1. Sublicensee may execute the Sublicensed Software on computer hardware other than the Designated Hardware only if such use takes place at the same location as the Designated Hardware and Sublicensee is unable to use the Designated Hardware due to scheduled maintenance or malfunction of the Designated Hardware.

2.2. Sublicensed Software which is designated for workstations may be executed and utilized on any workstation but limited to the total number of workstations to which copies of the Sublicensed Software are licensed in Appendix A.

2.3. The foregoing sublicense includes the right to make one (1) copy of the Sublicensed Software, in nonprinted, machine-readable form, solely for backup and archival purposes, provided that the copy shall include and incorporate VTLS Inc.'s copyright and proprietary rights notices for the Sublicensed Software.

3. SUBLICENSEES THAT ARE UNITS OR AGENCIES OF THE U.S. OR STATE GOVERNMENTS. The provisions of paragraphs 3.1, 3.2, 3.3, 3.4 and 3.5 apply to Subicensees that are units or agencies of the U.S. or State Government or when a Sublicensee makes the Sublicensed Software available to a unit or agency of the U.S. or State Government.

3.1 **The Sublicensed Software is Licensor's Confidential Property, a Trade Secret, and Subject to Licensor's Copyright.** The Sublicensed Software was developed entirely at private expense and in all respects is proprietary data belonging solely to Licensor and all rights thereto are reserved to Licensor under the copyright laws of the United States. The Sublicensed Software is a trade secret of Licensor and exempt from release under the Freedom of Information Act, 5 U.S.C. § 552 et seq., and under any applicable state freedom of information acts. Sublicensee covenants and agrees to immediately notify VTLS Inc. in writing upon Sublicensee's receipt of any request that may result in the disclosure of the Sublicensed Software to a party not bound by this Agreement.

3.2 **Restrictions on Rights of Government Users of the Sublicensed Software.** As the Sublicensed Software was developed entirely at private expense, it constitutes "Commercial Computer Software," as that term is defined in the Federal Acquisition Regulations (FAR). If the Sublicensed Software is to be provided to any agency or entity of the U.S. Government, it shall only be provided to the agency or entity with the rights specified in the standard commercial license specified by VTLS Inc., or, with the prior written authorization of VTLS Inc., with "Restricted Rights" as set forth in FAR 52.227-19, ("Commercial Computer Software - Restricted Rights") (June 1987) and any associated "technical data" shall only be provided with "Restricted Rights" as that term is defined in FAR 52.227-14 (June 1987). If the agency or entity of the U.S. Government is subject to the Department of Defense Federal Acquisition Regulation Supplement (DFARS) then, in accordance with DFARS § 227.7202-1 ("Commercial Computer Software and Commercial Computer Software Documentation"), the Sublicensed Software can only be provided to the agency or entity with the rights specified in the VTLS Inc. standard commercial sublicense.

3.3 The Sublicensed Software can only be provided to state or local government agencies or entities with the rights specified in the VTLS Inc. standard commercial license specified by VTLS Inc.

3.4 The Sublicensee is obligated hereunder to take all steps necessary, including but not limited to those required under the FAR and DFARS, to ensure that the Sublicensed Software is identified as "Commercial Computer Software" and is provided to the U.S. Government, or to any other governmental entity, in strict compliance with this provision. Any breach of this provision is a material breach of this Agreement.

3.5 Sublicensee waives the defense of sovereign immunity to any claim of VTLS Inc. or Licensor arising from or relating to this Agreement.

4. SUPPLEMENTAL SOFTWARE. Sublicensee agrees that any supplemental software delivered to Sublicensee by VTLS Inc. (including upgrades to Sublicensed Software) subsequent to the initial delivery of the Sublicensed Software under this Agreement shall also be deemed Sublicensed Software, and thus are subject to all terms and conditions of this Agreement.

5. PAYMENT TERMS AND CONDITIONS. In consideration of the Sublicense granted hereunder, Licensee agrees to pay VTLS Inc. the Initial Sublicense Fee(s) specified in Appendix A.

5.1. Initial Sublicense Fee(s) and all fees for VTLS Inc. services shall be due thirty (30) days after receipt of a VTLS Inc. invoice.

5.2. Sublicense Renewal Fees (as hereinafter defined) are hereby waived for the Sublicense Renewal Periods (as hereinafter defined), provided a VTLS Inc. Third Party Software Maintenance and Support Agreement ("Maintenance Agreement") is in force, and all fees due under the Maintenance Agreement are remitted to VTLS Inc. in a timely manner. Otherwise, Sublicense Renewal Fees, in the amount of five percent (5%) of the Initial Sublicense Fee(s) as specified in Appendix A, shall be payable in full at the beginning of each Sublicense Renewal Period.

5.3. All payments shall be made within thirty (30) days of receipt of an invoice. Sublicensee agrees to pay VTLS Inc. a charge of one and one-half percent (1 1/2%) per month on all overdue balances. Sublicensee agrees to pay VTLS Inc.'s actual attorneys' fees, costs and expenses of collection in the event VTLS Inc. retains counsel to collect any amount due under this Agreement.

6. OWNERSHIP. Sublicensee acknowledges and agrees that this Agreement is a nonexclusive, nontransferable sublicense only and does not constitute a sale or transfer of title to the Sublicensed Software. Licensor(s) retains all ownership and proprietary rights in and to the Sublicensed Software and any software products derived from this Sublicensed Software. Sublicensee further acknowledges and agrees that the Sublicensed Software is proprietary to Licensor(s), whether or not any portion of it may be protected by patent or copyright.

7. WARRANTIES. VTLS Inc. represents and warrants that it has the full right and authority to enter into this Agreement and to grant the sublicense set forth in Section 2 hereof and that the Sublicensed Software, when delivered, shall be substantially free from material defects in materials and workmanship. If Sublicensee informs VTLS Inc. within Licensor's Warranty Period that any Sublicensed Software delivered and licensed hereunder is materially defective in materials or workmanship, and if VTLS Inc. confirms this to be correct, VTLS Inc. shall, at its option, replace the medium on which such Sublicensed Software is contained or refund to Sublicensee the Initial Sublicense Fee with respect to such Sublicensed Software. This shall be Sublicensee's sole remedy for breach of the foregoing warranty.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE WARRANTIES EXPRESSLY SET FORTH IN THIS SECTION 7. WITH THE EXCEPTION OF THE EXPRESS WARRANTY SET FORTH IN THIS SECTION 7, VTLS INC. DISCLAIMS ALL WARRANTIES REGARDING THE SUBLICENSED SOFTWARE, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY IN REGARD TO QUALITY, PERFORMANCE, MERCHANTABILITY OR FITNESS OF THE SUBLICENSED SOFTWARE FOR A PARTICULAR PURPOSE.

8. INDEMNIFICATION OF SUBLICENSEE.

8.1. Notice of Claim. Sublicensee agrees to notify VTLS Inc. of any claim, action or suit against Sublicensee alleging that the Sublicensed Software infringes any United States patent, copyright, trade secrets or other proprietary ownership right of a third party.

8.2. Indemnification. During the Term of this Agreement, VTLS Inc. agrees to indemnify and hold Sublicensee harmless against any loss, damage or liability incurred by Sublicensee arising out of any claim that the Sublicensed Software infringes a United States patent or copyright or constitutes misappropriation of a trade secret or other proprietary right of a third party; provided, however, that the indemnification provided hereunder is contingent upon the: (1) Sublicensee notifying VTLS Inc. promptly in writing that a claim is threatened or has been brought, (2) Sublicensee granting VTLS Inc. the right to assume the defense of such claim, with counsel selected by VTLS Inc., and (3) Sublicensee's reasonable cooperation with VTLS Inc. in defense of such claim.

8.3. Remedies. If Sublicensee's continued use of any of the Sublicensed Software is permanently enjoined so that Sublicensee's use of the Sublicensed Software is substantially impaired, VTLS Inc. shall use its reasonable best efforts to (1) obtain for Sublicensee the right to continue using such Sublicensed Software, (2) modify such Sublicensed Software so it is not subject to the injunction and is functionally equivalent to the original, or (3) substitute other Sublicensed Software that is not subject to the injunction and is functionally equivalent to the original. If none of the above options is reasonably available to VTLS Inc., Sublicensee or VTLS Inc. may terminate this Agreement with respect to such Sublicensed Software, and VTLS Inc. shall promptly refund the Initial Sublicense Fee with respect to such Sublicensed Software.

8.4. Unauthorized Changes. VTLS Inc. shall have no liability for any claim, action or suit alleging that any Sublicensed Software infringes a United States patent or copyright or constitutes misappropriation of a trade secret or other proprietary right of a third party if such claim arises from any change, modification or alteration to the Sublicensed Software which is not made or authorized in writing by VTLS Inc.

9. LIMITATION OF LIABILITY AND INDEMNIFICATION BY SUBLICENSEE. VTLS Inc. shall not be liable for any indirect, special, incidental, consequential, punitive or exemplary damages resulting from the breach of this Agreement, the use or operation of any Sublicensed Software, or from any defects or errors of any kind in the Sublicensed Software, or from any action or inaction by VTLS Inc., whether such claim is based in contract or in tort. Notwithstanding any other provision of this Agreement, VTLS Inc.'s liability to Sublicensee under any theory shall not exceed the Initial Sublicense Fee(s) paid by Sublicensee hereunder. Sublicensee shall indemnify and hold VTLS Inc. harmless against any and all losses, damages or claims relating in any way to the content, accuracy, completeness or performance of Sublicensee's own computer programs or data. The provisions of this Section 9 shall survive the termination, cancellation or expiration of this Agreement for any reason.

10. MODIFICATION OF SOFTWARE IS PROHIBITED. Sublicensee shall not modify, reverse engineer, recompile or decompile Sublicensed Software. Further, Sublicensee shall not make modifications to or alter the performance of any portions of the Sublicensed Software that produce displays of or contain references to or otherwise identify by name the Sublicensed Software or its copyright or VTLS Inc., examples being, by way of illustration and not by way of limitation, "VTLS", "VIRTUA", "Micro-VTLS" , or "VTLS InfoStation." Any unauthorized modifications to the Sublicensed Software shall be proprietary to VTLS Inc. and shall remain subject to all other provisions of this agreement.

11. CONFIDENTIALITY. Sublicensee agrees that it will not reveal or disclose to any other person the Sublicensed Software, or any details, contents, programs or any other proprietary information whatsoever concerning the Sublicensed Software, except to persons who require such information in the exercise of Sublicensee's sublicense(s) hereunder. Sublicensee further agrees that it will secure from such persons, and any other persons who have access to the Sublicensed Software pursuant to this Agreement, whether Sublicensee's employees or not, an executed confidentiality agreement. Sublicensee's confidentiality obligations hereunder shall survive the expiration or earlier termination of this Agreement.

12. TERM. This Agreement shall continue in full force and effect from the Effective Date until December 31 of the then calendar year, and shall automatically renew for additional one (1) year periods ("Sublicense Renewal Period(s)") unless terminated by Sublicensee by the giving of written notice to VTLS Inc. on or before ninety (90) days prior to the end of the Sublicense Renewal Period; or unless this Agreement is earlier terminated pursuant to the provisions of Section 13, hereof.

13. DEFAULT AND TERMINATION. The following shall constitute an event of default:

13.1. Sublicensee's failure to make any payment hereunder within thirty (30) days after the due date of such payment.

13.2. The failure by either party to perform any obligation hereunder within sixty (60) days after receipt of written notice of such failure from the other party or, if the failure cannot be cured within such sixty (60) day period, then the failure to commence immediately and proceed diligently to perform such obligation within sixty (60) days of receipt of written notice.

Upon the occurrence of an event of default, the nondefaulting party may terminate this Agreement by giving written notice to the defaulting party, such termination to take effect upon receipt, and pursue any and all other remedies available at law or in equity. Within thirty (30) days after the termination or expiration of this Agreement, Sublicensee shall destroy or return to VTLS Inc. the Sublicensed Software (and all copies thereof), and an officer of Sublicensee shall certify in writing to VTLS Inc. that such action has been taken.

14. FORCE MAJEURE. With the exception of the Sublicensee's failure to make any payment required hereunder when due, if the performance of this Agreement is prevented or interfered with by reason of any circumstances beyond the reasonable control of a party hereto, such party shall be excused from such performance for the duration of the force majeure, provided that the party so affected shall use reasonable efforts to remove the force majeure.

15. ENTIRE AGREEMENT. This document constitutes the entire understanding of the parties with respect to the matters set forth herein and supersedes all prior written and oral understandings between the parties with respect thereto.

16. ASSIGNMENT. VTLS Inc. shall have the absolute right to assign all of its rights and duties hereunder to any other party who, in its sole judgment, shall be financially and technically qualified to carry out its duties hereunder.

17. GOVERNING LAW. This Agreement shall be governed by, construed and enforced in accordance with the laws of the Commonwealth of Virginia, USA, without regard to the principles of conflicts of laws of any jurisdiction.

18. LIMITATION OF ACTIONS; JURISDICTION. With the exception of an action or suit for the Sublicensee's failure to make any payment required hereunder when due, no suit or action arising under this Agreement may be brought more than one (1) year following the occurrence giving rise thereto. All suits and actions arising under this Agreement shall be brought in the Commonwealth of Virginia, and Licensee hereby submits to the jurisdiction of the courts of the Commonwealth of Virginia and the United States District Courts sitting in Virginia.

19. SEVERABILITY. If any provision of this Agreement shall be determined to be void, invalid, unenforceable or illegal for any reason, the validity and enforceability of all of the remaining provisions hereof shall not be affected thereby.

20. FAILURE TO EXERCISE RIGHTS; WAIVER. The failure of either party to exercise any of its rights under this Agreement for a breach thereof shall not be deemed to be a waiver of such rights nor shall the same be deemed to be a waiver of any subsequent breach. No term or provision hereof shall be deemed waived and no breach excused unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented.

21. HEADINGS. The headings of the sections hereof are for convenience only and do not in any way limit or amplify the terms and conditions of this Agreement.

22. TAXES. Sublicensee shall pay all sales, use, value added taxes (VAT), transfer or other taxes, whether federal, state or local, however designated, which are levied or imposed by reason of the transaction contemplated hereby; excluding, however, income taxes on profits which may be levied against VTLS Inc. Sublicensee shall reimburse VTLS Inc. for the amount of any such taxes paid or accrued by VTLS Inc. as a result of this transaction.

23. NOTICES AND CHANGES. Any notice or other communication hereunder shall be in writing and sent to the principal address of the party set forth in the introductory section of this Agreement. Notice is effective when received. No change to any provision hereof shall be effective unless stated in writing and signed by both parties hereto.

24. INDEPENDENT CONTRACTOR. It is expressly understood that VTLS Inc. and Sublicensee are contractors independent of one another, and that neither has the authority to bind the other to any third person or otherwise to act in any way as the representative of the other, unless otherwise expressly agreed to in a writing signed by both parties hereto.

25. CONSTRUCTION OF AGREEMENT. The provisions of this Agreement were negotiated in all respects by the parties hereto. This Agreement shall not be construed against the drafter hereof.

WITNESS the following signatures and seals:

Sublicensee:		**VTLS Inc.**	
By:	_____	**By:**	_____
Its	_____	**Its**	_____
(Date)	_____	**(Date)**	_____

APPENDIX A TO
VTLS Inc. SOFTWARE SUBLICENSE AGREEMENT

THIS APPENDIX A is attached to the VTLS Inc. SOFTWARE SUBLICENSE AGREEMENT dated the _____ day of _____, 199___, between VTLS Inc. and _____ ("Sublicensee"), and is incorporated therein.

FOR PURPOSES OF THE AGREEMENT, "Sublicensed Software" means the computer programs identified below with their respective Licensors and warranty periods:

Qty.	Sublicensed Software		Licensor	Warranty
	Initial Cost:	$		
	Initial Cost:	$		
	Initial Cost:	$		

The Initial License Fees set forth herein are firm at the time of contract signing. Future fees are subject to change at the sole discretion of VTLS Inc.

APPENDIX B TO
VTLS Inc. SOFTWARE SUBLICENSE AGREEMENT

THIS APPENDIX B is attached to the VTLS Inc. SOFTWARE SUBLICENSE AGREEMENT dated the _____ day of _____, 199__, between VTLS Inc. and _____ ("Sublicensee"), and is incorporated therein.

1. DESIGNATED HARDWARE AND LOCATION(S) All Designated Hardware on which Sublicensed Software (excluding workstation software) shall be used shall be identified herein as to serial number, make and model number, and location. Written notification of any change in the location, make and model number, or serial number of any Designated Hardware must be provided by Sublicensee to VTLS Inc. within thirty (30) days of such change.

2. SUBLICENSED VIRTUA DATA BASE ACCOUNTS

2.1. All Sublicensed Software shall be used by Sublicensee only on the host computer(s) with the serial number and at the location designated below:

_____ (Institution)

_____ (Street Address)

_____ (City, State/Province)

_____ (Postal Code, Country)

_____ (Computer Make & Model)

_____ (Serial Number)

2.2. All Sublicensed Software designed for workstations shall be used pursuant to this Agreement and installed and used by Sublicensee only on the total number of workstations sublicensed herein.

VTLS Inc. THIRD PARTY S0FTWARE MAINTENANCE AND SUPPORT AGREEMENT

THIS AGREEMENT [and Appendices A and B referenced herein and annexed hereto (collectively, the Agreement)] is made and entered into this ____ day of _____, 199__, (the "Effective Date") by and between **VTLS Inc.**, a Virginia corporation with its principal place of business at 1701 Kraft Drive, Blacksburg, Virginia 24060-6350, USA, and _____, with its principal place of business in _____ ("Sublicensee").

In consideration of the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

W I T N E S S E T H:

1. **VALIDITY.** This Agreement is valid only if and to the extent that a VTLS Inc. *SOFTWARE SUBLICENSE AGREEMENT* is in effect between VTLS Inc.and Sublicensee.

2. **SUBLICENSED SOFTWARE.** This Agreement shall be binding on the parties with respect to the computer programs specified in Appendix A hereto which are covered by an effective VTLS Inc. Software Sublicense Agreement ("Sublicensed Software").

3. **LOCATION OF SOFTWARE.** VTLS Inc. shall maintain Sublicensed Software pursuant to this Agreement only when installed on the host computer(s) specified in Appendix B hereto.

4. **TERM OF AGREEMENT.** This Agreement shall continue in full force and effect for one year from the Effective Date and shall automatically renew for one (1) year Maintenance Renewal Periods as described in Section 5.1 unless terminated by either party by the giving of written notice to the non-terminating party on or before 90 days prior to the end of the Maintenance Renewal Period; or unless this Agreement is earlier terminated pursuant to the provisions of Section 8 below.

5. **MAINTENANCE FEES; PAYMENT TERMS.** In consideration of the provision of maintenance services hereunder, Sublicensee agrees to pay to VTLS Inc. the annual maintenance fees specified in Appendix A hereto ("Maintenance Fees"). Maintenance Fees are subject to adjustment annually to reflect the actual and reasonable costs of VTLS Inc.

5.1. Maintenance Renewal Periods may begin on the first day of January and continue in effect through the last day of December of the same calendar year or may begin on the first day of July and continue in effect through the last day of June of the succeeding calendar year, at the option of Sublicensee.

5.2. Maintenance Fees, at the then-current price, shall be invoiced annually in advance. All payments shall be made within thirty (30) days of receipt of an invoice. Sublicensee agrees to pay VTLS Inc. a charge of one and one-half percent (1 1/2%) per month on all overdue balances. Sublicensee agrees to pay VTLS Inc.'s actual attorney's Fees, costs and expenses of collection in the event VTLS Inc. retains counsel to collect any amount due under this Agreement.

6. **SERVICES.** VTLS Inc. shall provide the following maintenance services with respect to the latest release of the Sublicensed Software:

6.1. **Support and Routine Assistance.** VTLS Inc.'s software support staff shall be available to assist and consult with Sublicensee by telephone from 8:00 a.m. to 8:00 p.m. Eastern Time, USA Monday through Friday, excluding official VTLS Inc. holidays. VTLS Inc.'s software support staff shall provide reasonable telephone support services to answer questions and to assist Sublicensee in solving problems related to the use and operation of the Sublicensed Software. VTLS Inc.'s software support staff shall not be responsible for training Sublicensee or Sublicensee's personnel to use the Sublicensed Software. Any and all problems experienced by Sublicensee arising from Sublicensee's data shall be Sublicensee's sole responsibility..

6.2. **Emergency Support for Sublicensed Software.** VTLS Inc.'s software support staff shall be available to assist Sublicensee by telephone 24 hours per day, seven days per week, with Sublicensed Software emergencies. An emergency is defined as a fully non-operational ("down") system or subsystem on the server. If Sublicensee uses such emergency service to obtain standard support services described in Subsections 6.1, 6.3, or 6.4 of this Agreement, Sublicensee shall be billed for such services at VTLS Inc.'s then-current rates for such services. VTLS Inc.'s current rate for non-emergency use of the VTLS emergency support service is U.S.$200.00 per hour with a one-half hour minimum charge.

6.3. **Software Errors and Corrections.** VTLS Inc. agrees to correct errors in the Sublicensed Software which come to VTLS Inc.'s attention and to supply corrections as they become available from the Licensor. Sublicensee agrees to report to VTLS Inc. any and all errors in the Sublicensed Software discovered by Sublicensee and to provide VTLS Inc. with sufficient documentation to enable VTLS Inc. to recreate the error on the latest release of the Sublicensed Software. Errors that cannot be recreated on the latest release shall be assumed to have been corrected in the latest release. Corrections to the Sublicensed Software shall be provided to Sublicensee either on DAT tape, or on diskette, or on CD-ROM as appropriate to the specific software, or in the form of specific instructions to be performed by Sublicensee or through dial-access to Sublicensee's computer/software system. Sublicensee shall provide dial access to the computer/software system to enable VTLS Inc.'s software support staff to diagnose and resolve problems. Such access should be complete and non-mediated. Both the port and modem provided by Sublicensee for the purpose of dial-access should usually be configured at 28800 baud, but not less than 14400 baud and not more than 33600 baud. Correction of data errors shall be the responsibility of Sublicensee.

6.4. **Updates and New Releases of Sublicensed Software and Documentation.** VTLS Inc. shall provide to Sublicensee all updates of the Sublicensed Software and documentation relating to the Sublicensed Software, as such updates become available from the manufacturer, provided Sublicensee has continuously maintained a VTLS Inc. Third Party Software Maintenance and Support Agreement with respect to such Sublicensed Software. Updates of Sublicensed Software shall be supplied on DAT Tape, a diskette or CD-ROM as appropriate to the specific software. Appropriate documentation and installation instructions with respect to updates also shall be provided. Sublicensee agrees to install each update of Sublicensed Software as soon as possible. Sublicensee may retain one back-up copy of Sublicensed Software for security purposes. The Software shall be installed only on the Designated Hardware identified in Appendix B hereto or as amended in writing.

7. **LIMITATION OF LIABILITY.** VTLS Inc. and Licensor(s) shall not be liable for any indirect, special, incidental, consequential, punitive or exemplary damages resulting from use or operation of any Sublicensed Software, or from any defects or errors of any kind in the Sublicensed Software, or from any action or inaction by VTLS Inc., whether such claim is based on contract or tort. Notwithstanding any other provision of this Agreement, VTLS Inc.'s and Licensor(s) liability to Sublicensee under any theory shall not exceed the fees paid by Sublicensee hereunder. Further, Sublicensee shall

indemnify and hold VTLS Inc. and Licensor(s) harmless against any and all losses, damages or claims - relating in any way to the content, accuracy, completeness or performance of Sublicensee's own computer programs, equipment or data. The provisions of this Section 7 shall survive the termination, cancellation or expiration of this Agreement for any reason.

8. DEFAULT AND TERMINATION. The following shall constitute an event of default:

8.1. Sublicensee's failure to make any payment hereunder within thirty (30) days after the due date of such payment.

8.2. The failure by either party to perform any obligation hereunder within sixty (60) days after written notice of such failure from the other party or, if the failure cannot be cured within such sixty (60) day period, then the failure to commence immediately and proceed diligently to perform such obligation within sixty (60) days of receipt of written notice.

Upon the occurrence of an event of default, the nondefaulting party may terminate this Agreement by written notice to the defaulting party, such termination to take effect upon receipt, and pursue any and all other remedies available at law or in equity.

Further, this Agreement shall automatically terminate in the event there is no longer a VTLS Inc. Software Sublicense Agreement in effect between VTLS Inc. and Sublicensee.

9. FORCE MAJEURE. With the exception of the Sublicensee's failure to make any payments required hereunder when due, if the performance of this Agreement is prevented or interfered with by reason of any circumstances beyond the reasonable control of a party hereto, such party shall be excused from such performance for the duration of the force majeure, provided that the party so affected shall use reasonable efforts to remove the force majeure.

10. ENTIRE AGREEMENT. This document constitutes the entire understanding of the parties with respect to the matters set forth herein and supersedes all prior written and oral understandings between the parties with respect thereto.

11. ASSIGNMENT. VTLS Inc. and Licensor(s) shall have the right to assign all of its rights and duties hereunder to any other party who, in its sole judgment, shall be financially and technically qualified to carry out its duties hereunder.

12. GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, USA without regard to the principles of conflicts of laws of any jurisdiction.

13. LIMITATION OF ACTIONS; JURISDICTION. With the exception of an action or suit for the Sublicensee's failure to make any payment required when due, no suit or action arising under this Agreement may be brought more than one (1) year following the occurrence giving rise thereto. All suits and actions arising under this Agreement shall be brought in the Commonwealth of Virginia, USA, and Sublicensee hereby submits to the jurisdiction of the courts of the Commonwealth of Virginia and the United States District courts sitting in Virginia.

14. **SEVERABILITY.** If any provision of this Agreement shall be determined to be void, invalid, unenforceable or illegal for any reason, the validity and enforeceability of all of the remaining provisions hereof shall not be affected thereby.

15. **FAILURE TO EXERCISE RIGHTS; WAIVER.** The failure of either party to exercise any of its rights under this Agreement for a breach thereof shall not be deemed to be a waiver of such rights nor shall the same be deemed to be a waiver of any subsequent breach. No term or provision hereof shall be deemed waived and no breach excused unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented.

16. **HEADINGS.** The headings of the sections hereof are for convenience only and do not in any way limit or amplify the terms and conditions of this Agreement.

17. **TAXES.** Sublicensee shall pay all sales, use, value added tax (VAT), transfer or other taxes, whether federal, state or local, however designated, which are levied or imposed by reason of the transaction contemplated hereby; excluding, however, income taxes on profits which may be levied against VTLS Inc. Sublicensee shall reimburse VTLS Inc. for the amount of any such taxes paid or accrued by VTLS Inc. as a result of this transaction.

18. **NOTICES AND CHANGES.** Any notice or other communication hereunder shall be in writing and sent to the principal address of the party set forth in the introductory section of this Agreement. Notice is effective when received. No change to any provision hereof shall be effective unless stated in writing and signed by both parties hereto.

19. **INDEPENDENT CONTRACTOR.** It is expressly understood that VTLS Inc. and Sublicensee are contractors independent of one another, and that neither has the authority to bind the other to any third person or otherwise to act in any way as the representative of the other, unless otherwise expressly agreed to in a writing signed by both parties hereto.

20. **CONSTRUCTION OF AGREEMENT.** The provisions of this Agreement were negotiated in all respects by the parties hereto. This Agreement shall not be construed against the drafter hereof.

WITNESS the following signatures and seals:

Sublicensee	**VTLS Inc.**
BY:_____	BY: _____
Its:_____	Its:_____

(Date)_____ (Date)_____

APPENDIX A TO
VTLS Inc. THIRD PARTY SOFTWARE MAINTENANCE AND SUPPORT AGREEMENT

THIS APPENDIX A is attached to the VTLS Inc. *THIRD PARTY SOFTWARE MAINTENANCE AND SUPPORT AGREEMENT* dated the ____ day of _____, 199___, between **VTLS Inc.** and _____ (Sublicensee), and is incorporated therein.

FOR PURPOSES OF THIS AGREEMENT, "Sublicensed Software" and "Maintenance Fees" mean the computer programs and fees indicated below:

Qty	Sublicensed Software	Licensor
	Level: User License: Maintenance Fee: $	
	Maintenance Fee: $	
	Maintenance Fee: $	
	Maintenance Fee: $	
	Total Maintenance Fees: $	

The Maintenance Fees set forth herein are subject to adjustment annually to reflect the actual and reasonable costs of VTLS Inc.

Sublicensed Software is licensed and maintained based on the number of simultaneous users. Sublicensed Software can be upgraded to accommodate more simultaneous users and additional subsystems.

APPENDIX B TO

VTLS INC. THIRD PARTY SOFTWARE MAINTENANCE AND SUPPORT AGREEMENT

THIS APPENDIX B is attached to the VTLS Inc. THIRD PARTY SOFTWARE MAINTENANCE AND SUPPORT AGREEMENT dated the _____ day of _____, _____, between VTLS Inc. and _____ (Sublicensee), and is incorporated therein.

1. **DESIGNATED HARDWARE AND LOCATION(S).** All Designated Hardware on which Sublicensed Software shall be maintained under this Agreement shall be identified hereinafter as to serial number, make and model number, and location. Written notification of any change in the location, make and model number, or serial number of any Designated Hardware must be provided by Sublicensee to VTLS Inc. within thirty (30) days of such change.

2. **VTLS DATA BASE ACCOUNTS**

2.1. All Sublicensed Software maintained hereunder shall be used by Sublicensee only on the host computer designated by the following serial number and located at the following designated location:

_____ (Institution)

_____ (Street Address)

_____ (City, State/Province)

_____ (Postal Code, Country)

_____ (Computer Make & Model)

_____ (Serial Number)

2.2. All Sublicensed Software designed for workstations shall be maintained pursuant to this Agreement, and installed and used only on the total number of workstations licensed on the VTLS Inc. Software Sublicense Agreement.

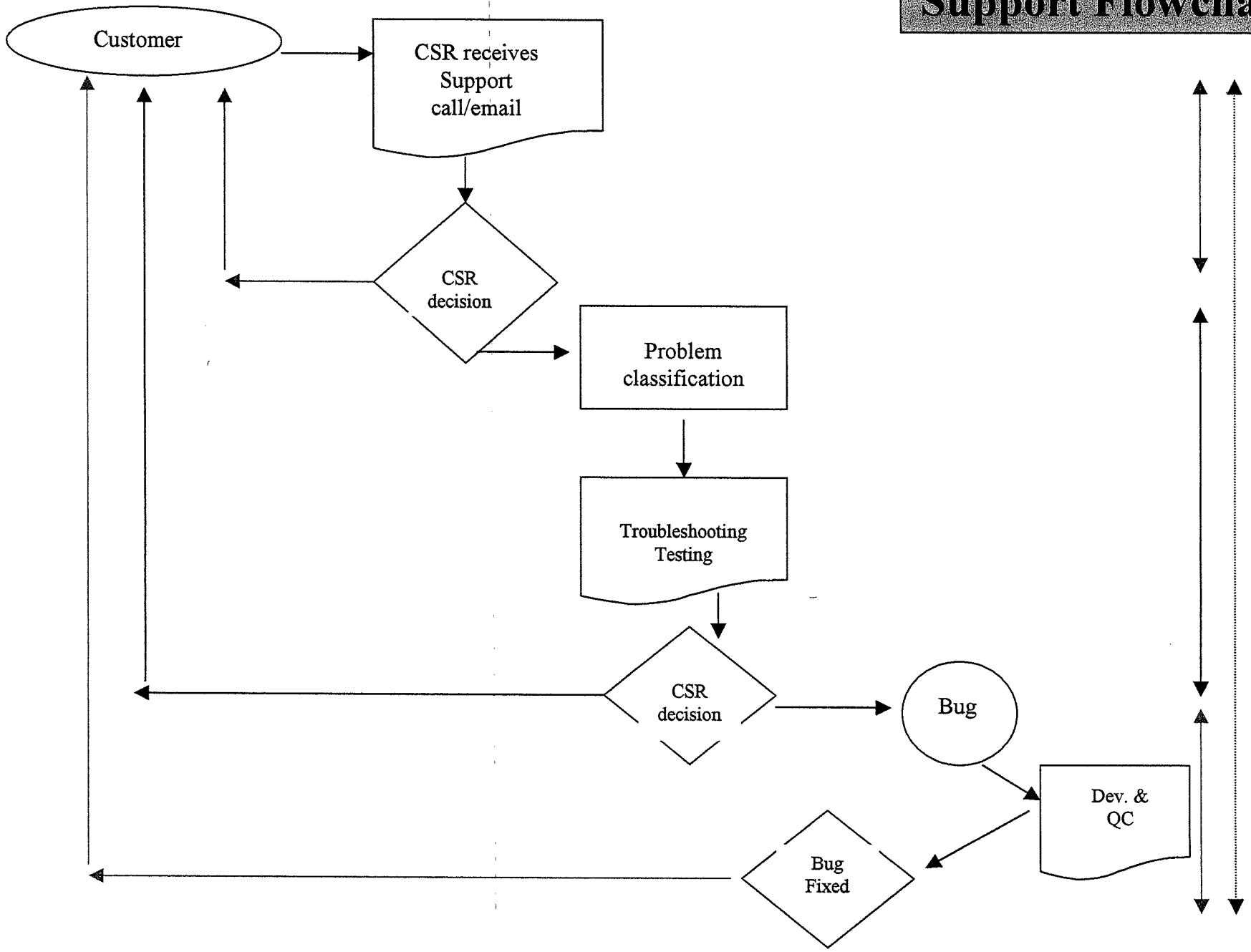
APPENDIX 3.3

CUSTOMER SERVICE FLOWCHART

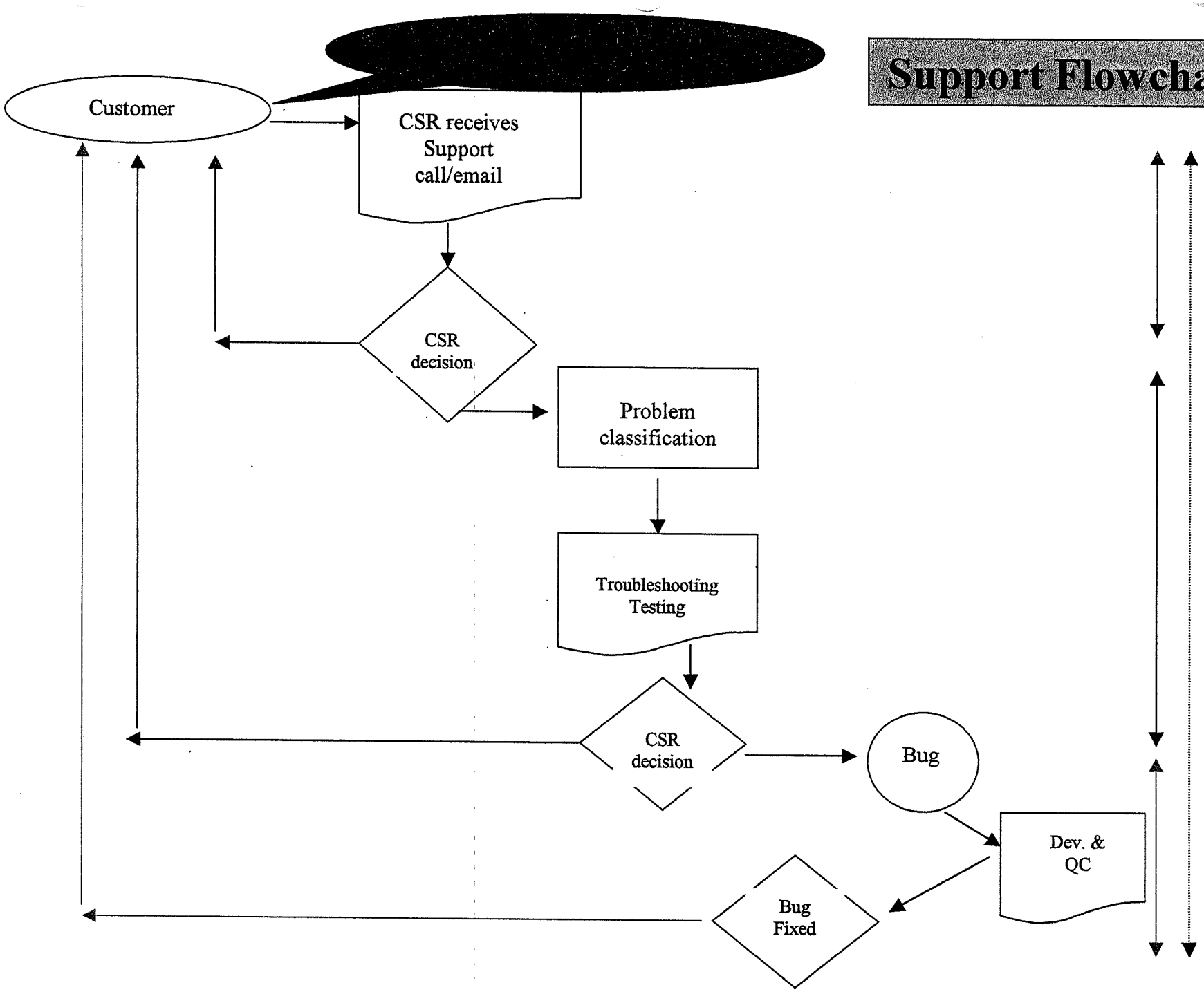
VIRTUA

VTLS Inc.

Support Flowchart



Support Flowchart



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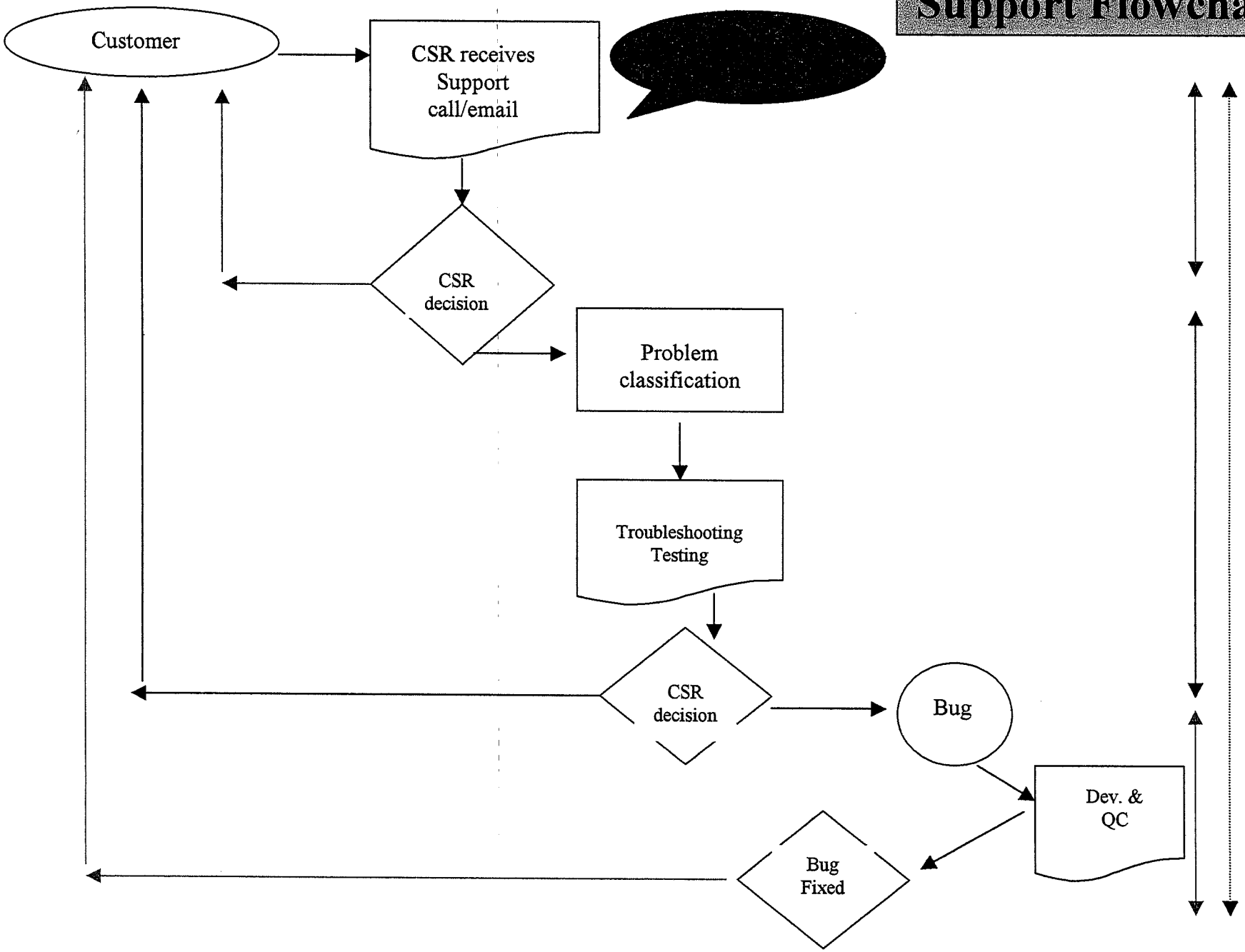

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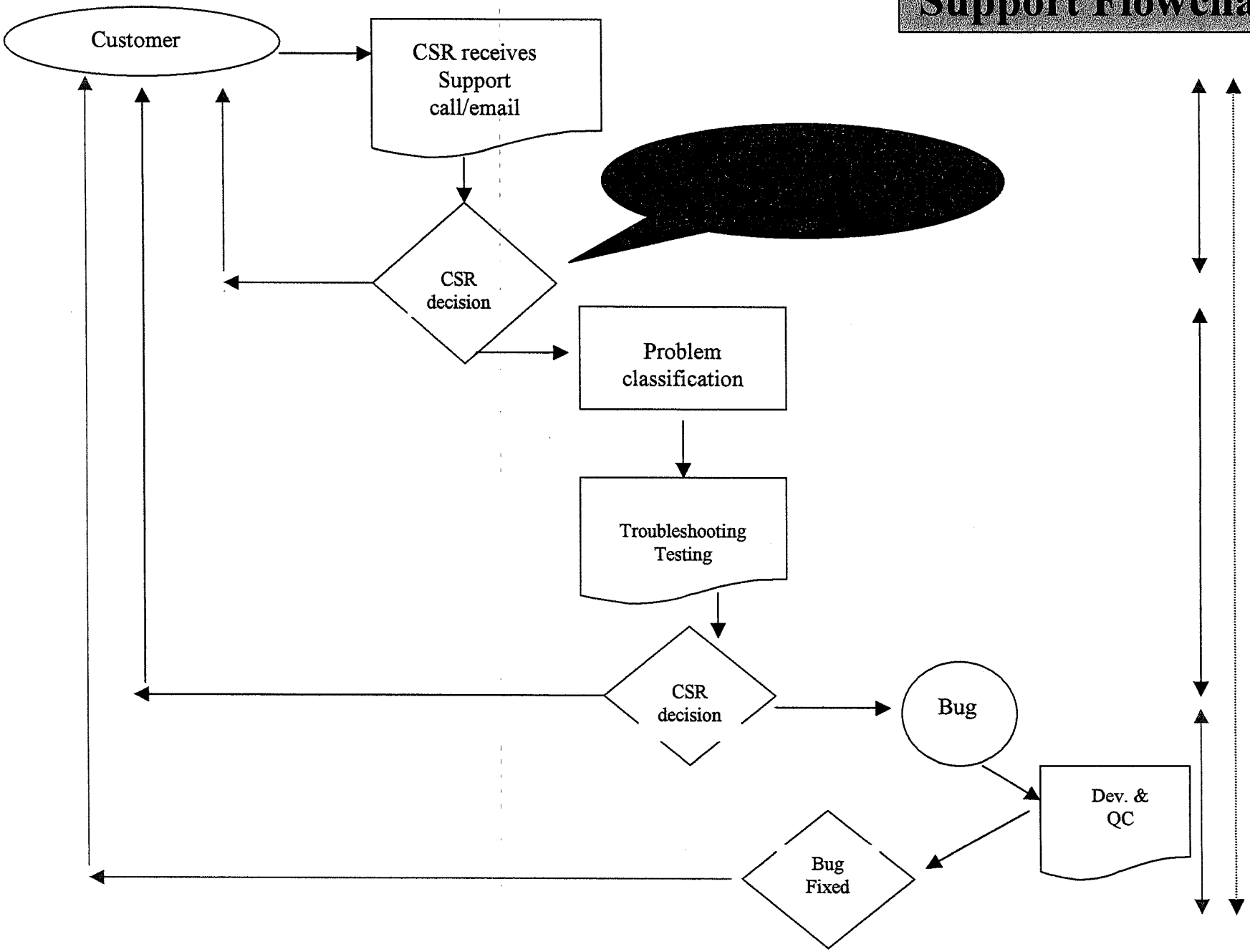

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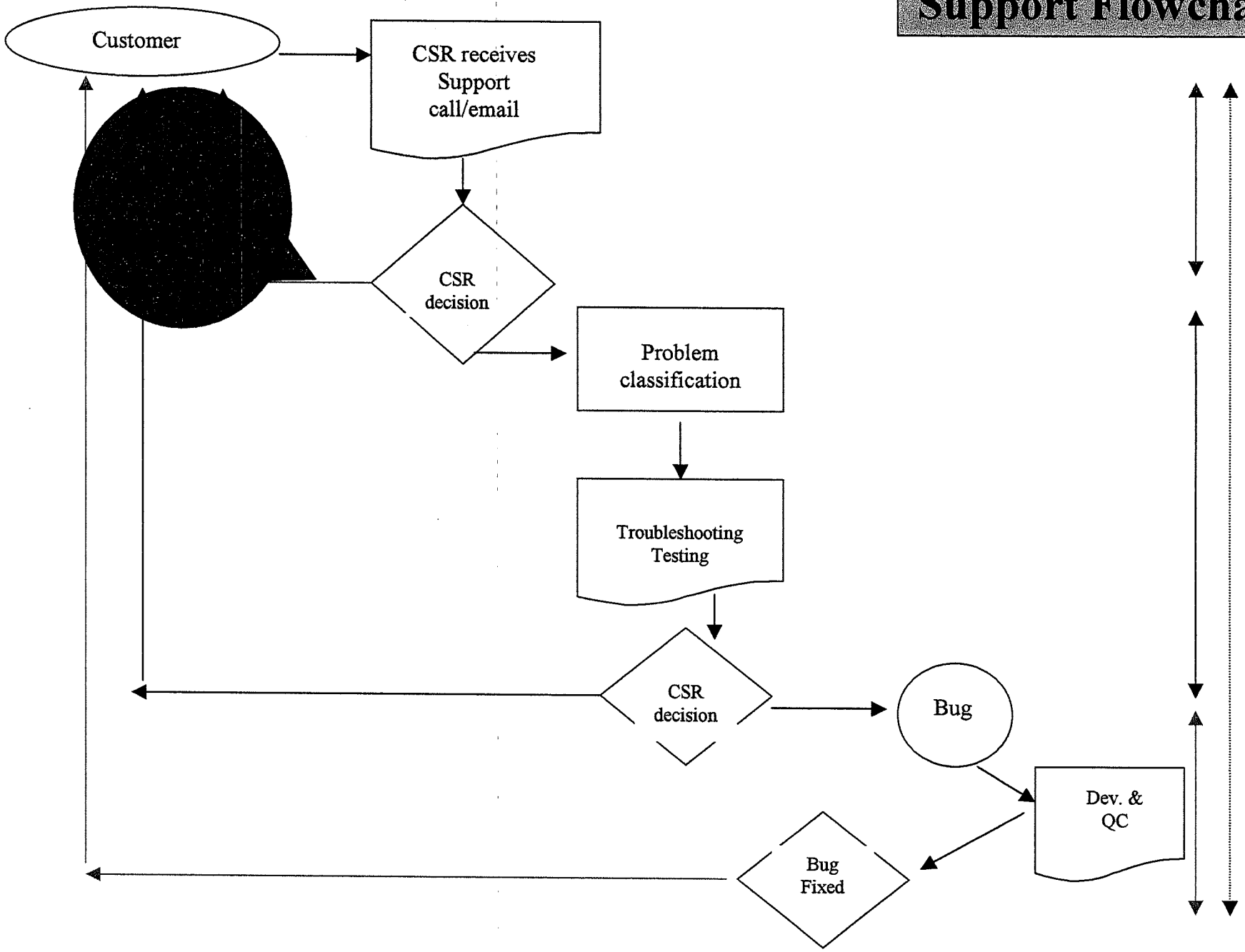

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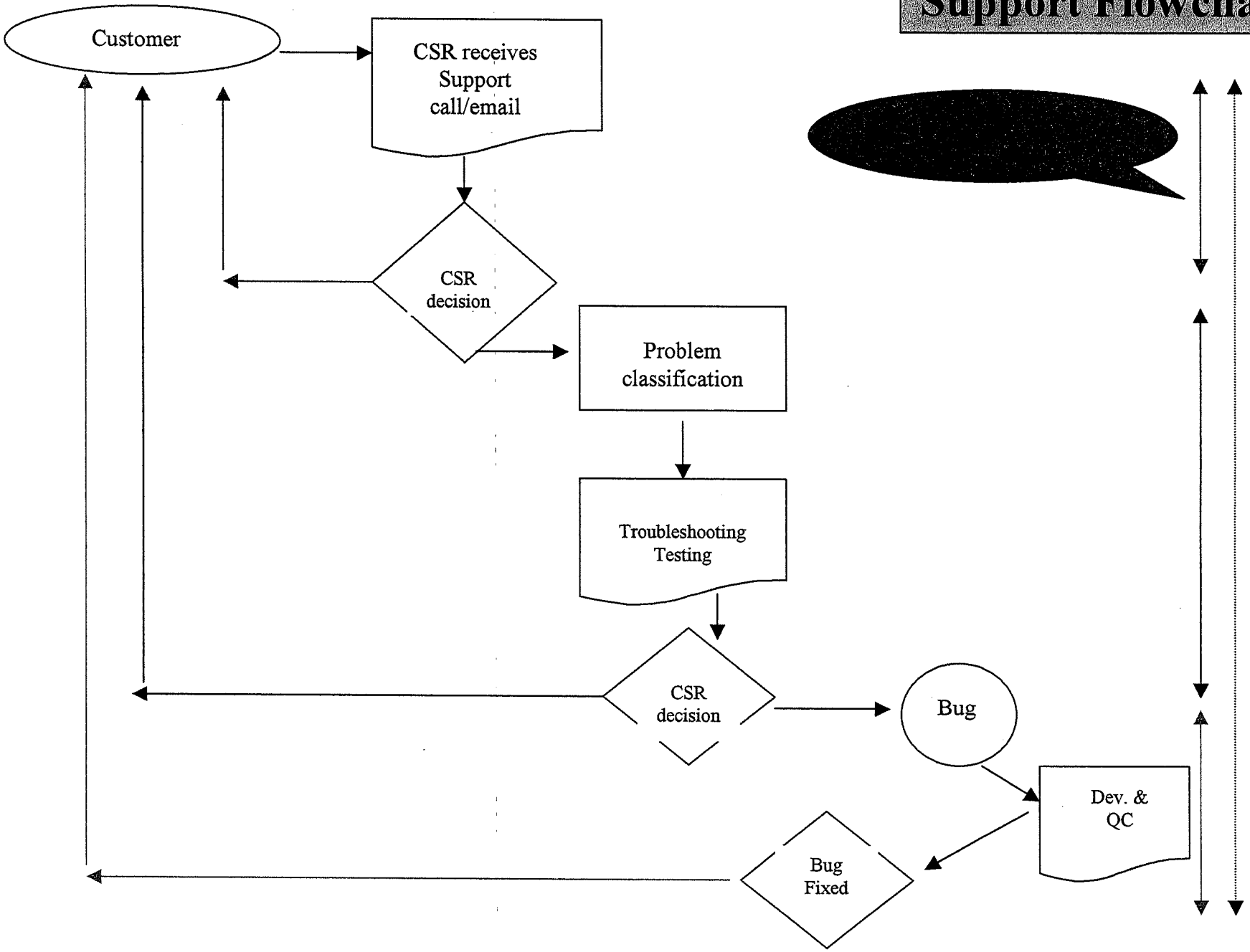

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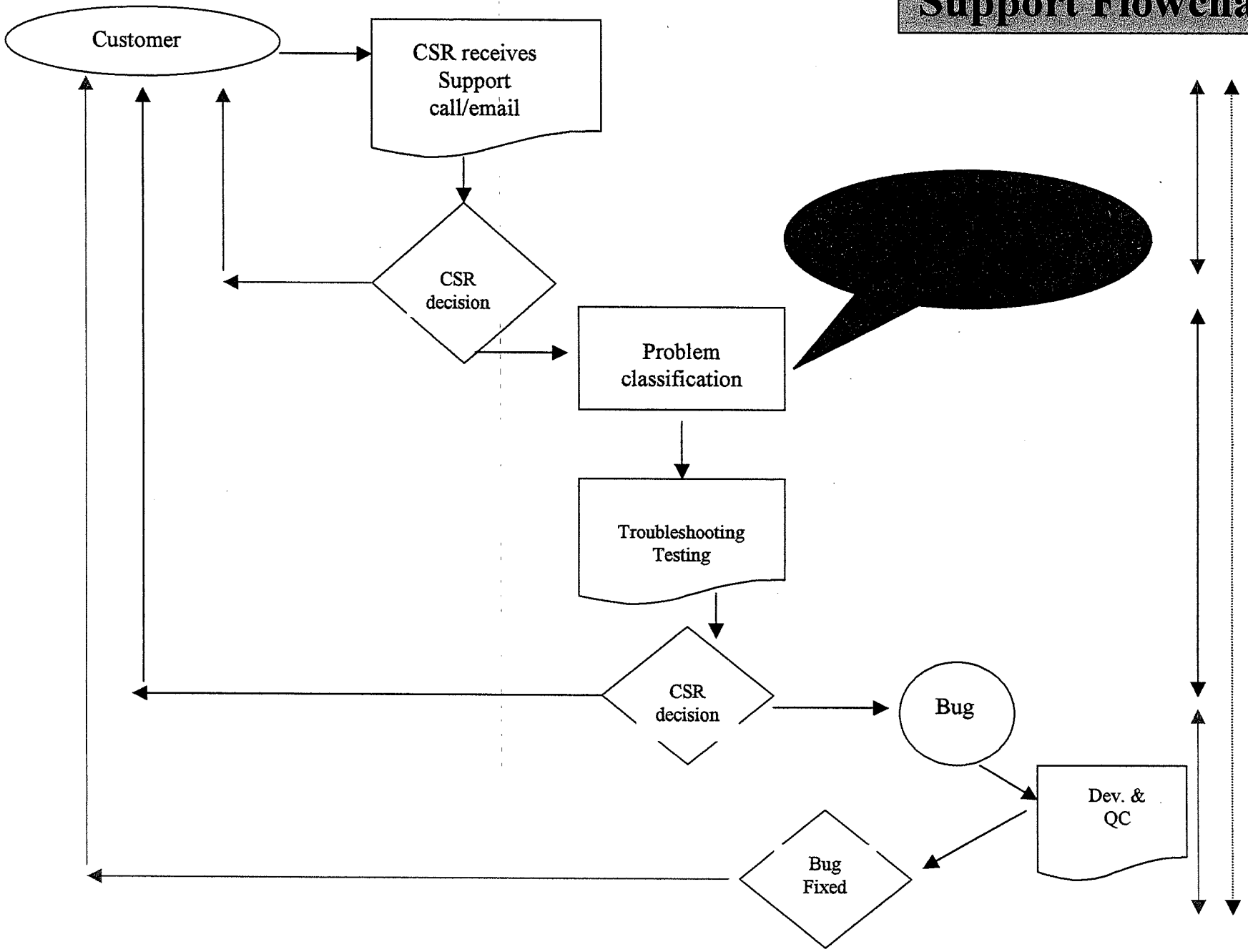

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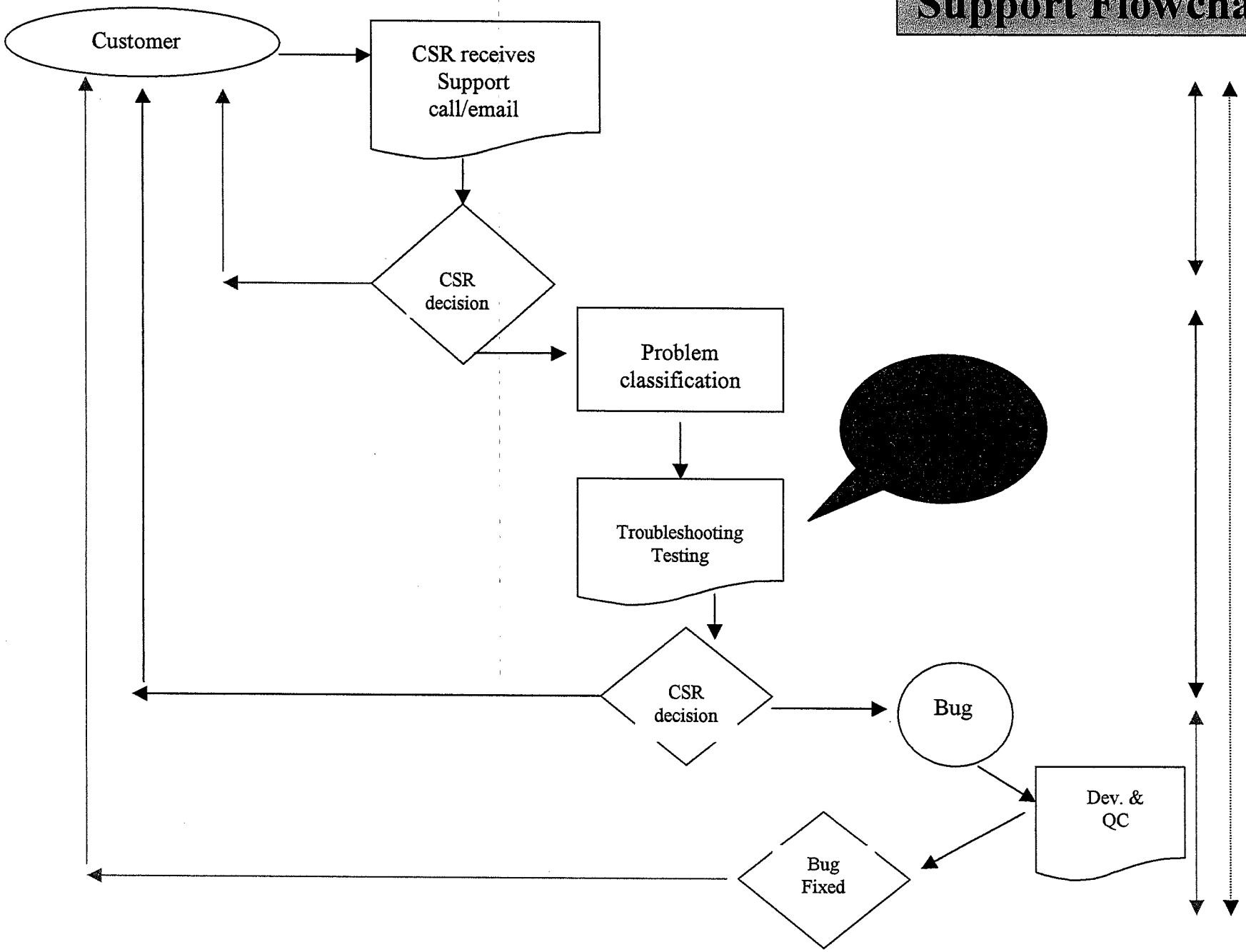

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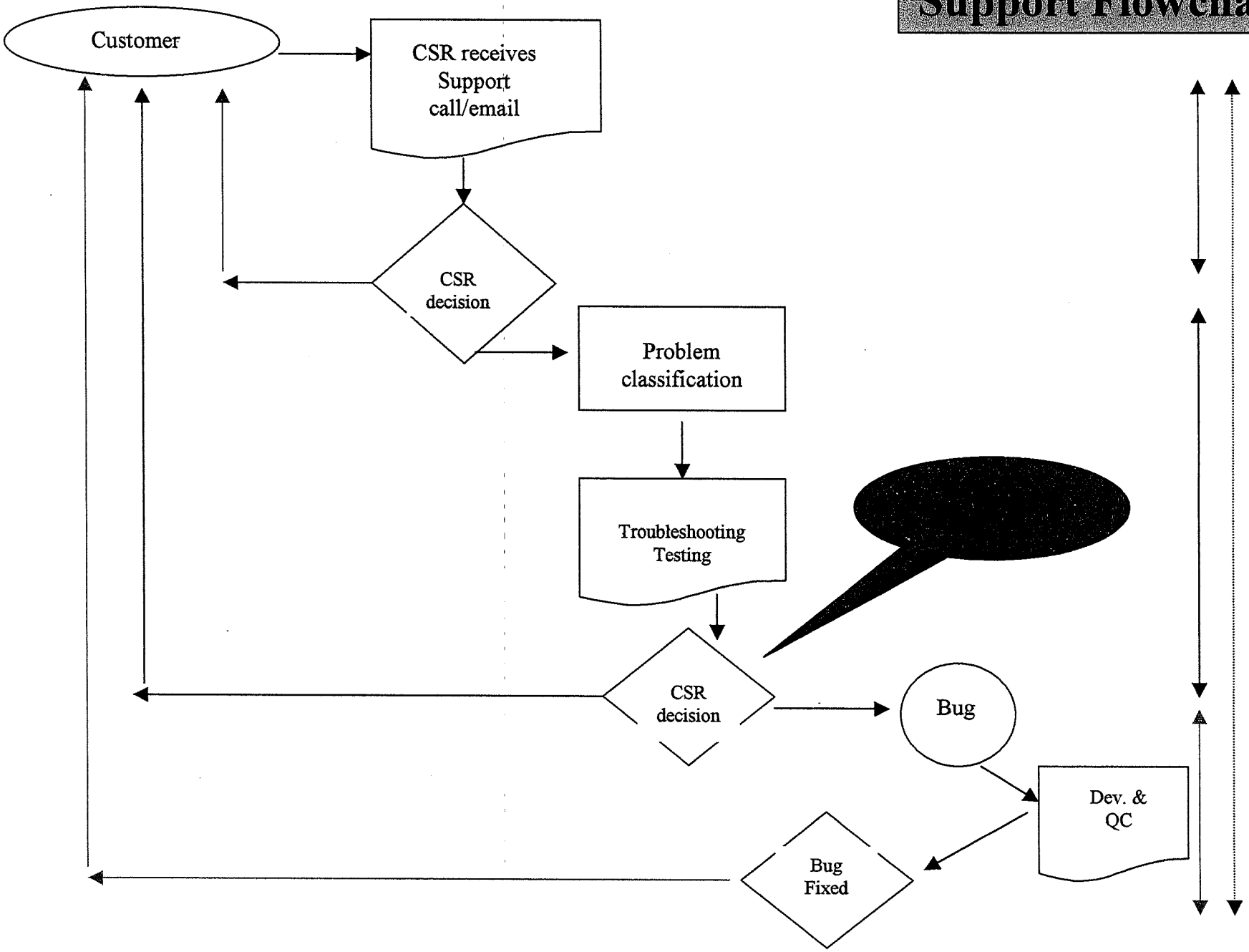

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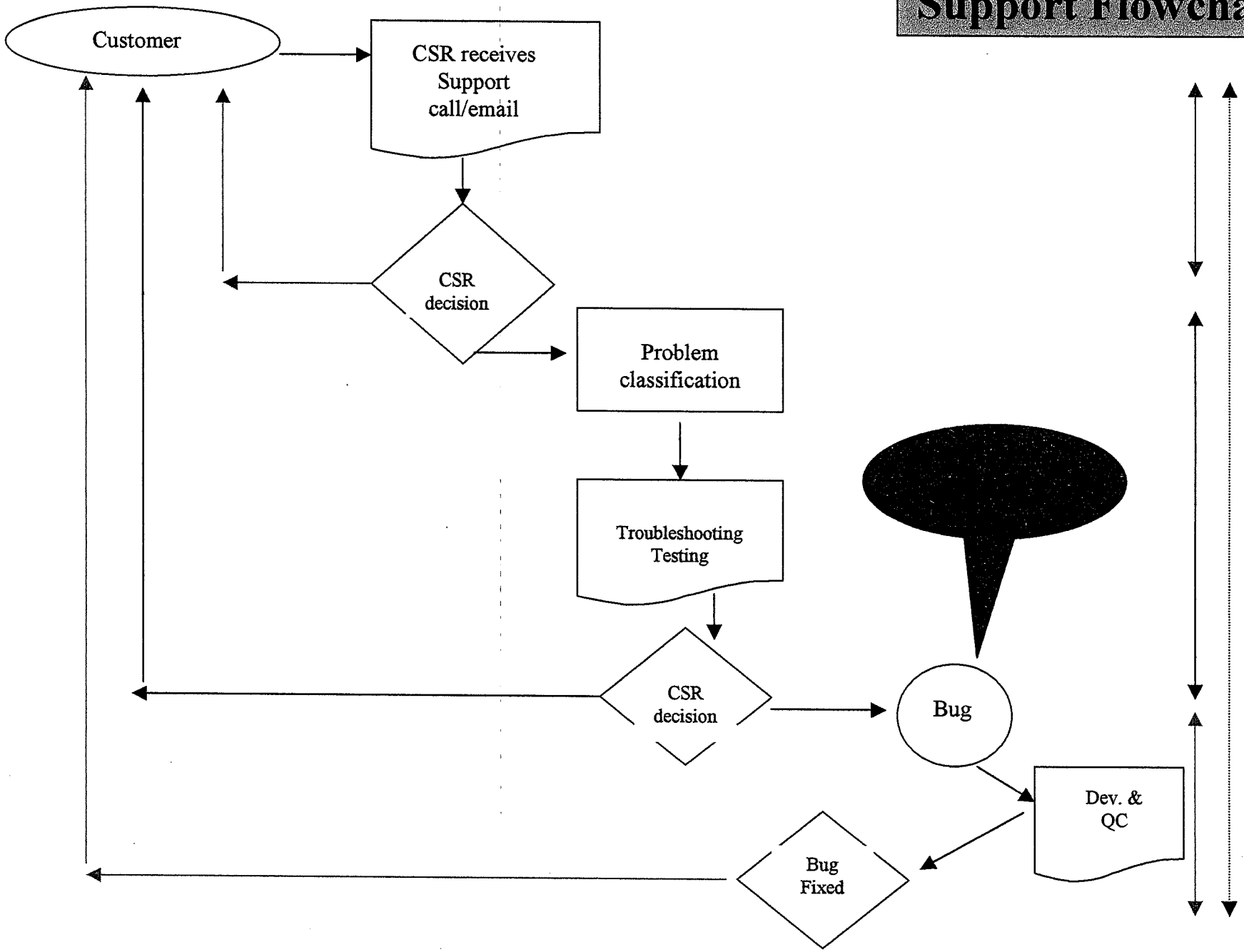

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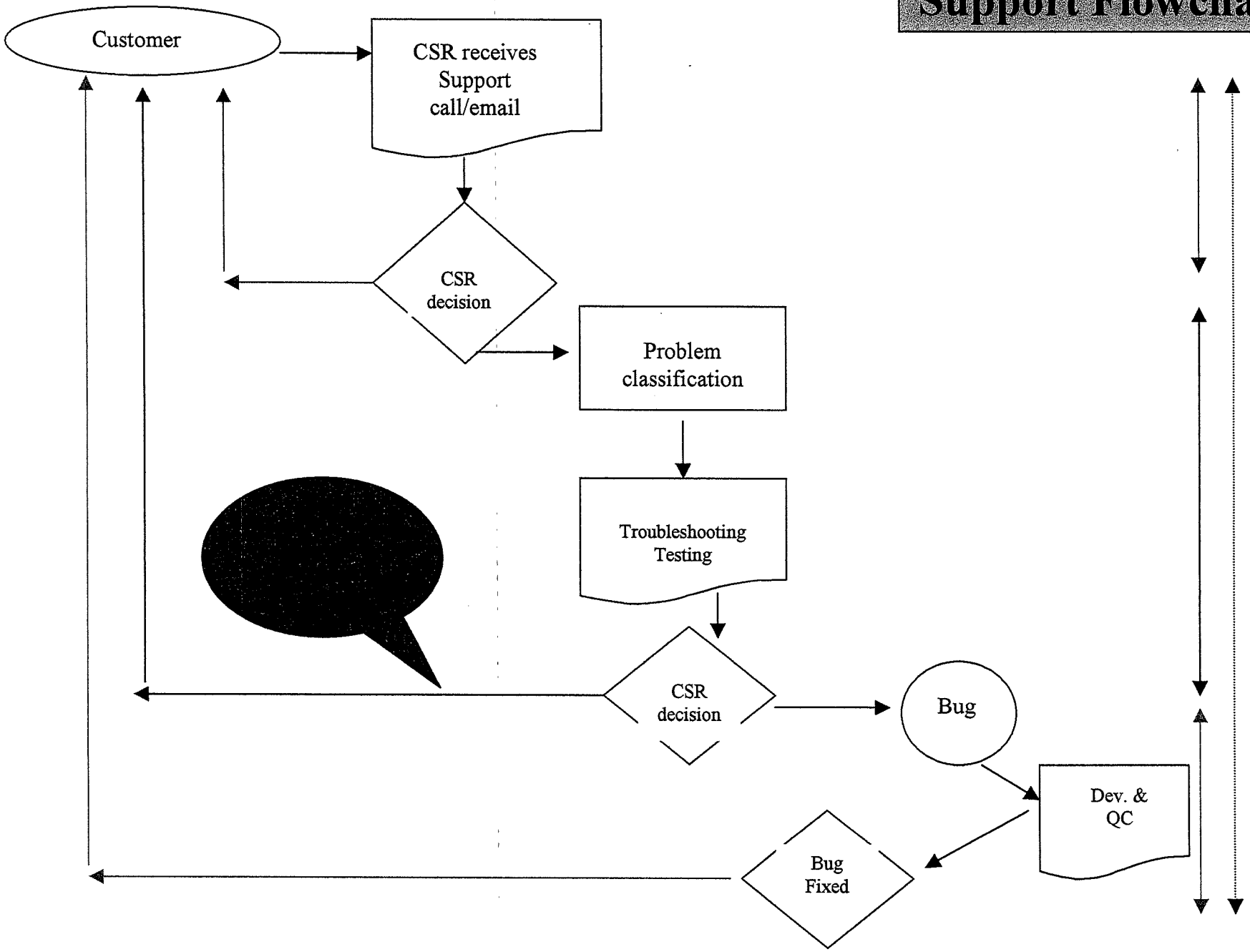

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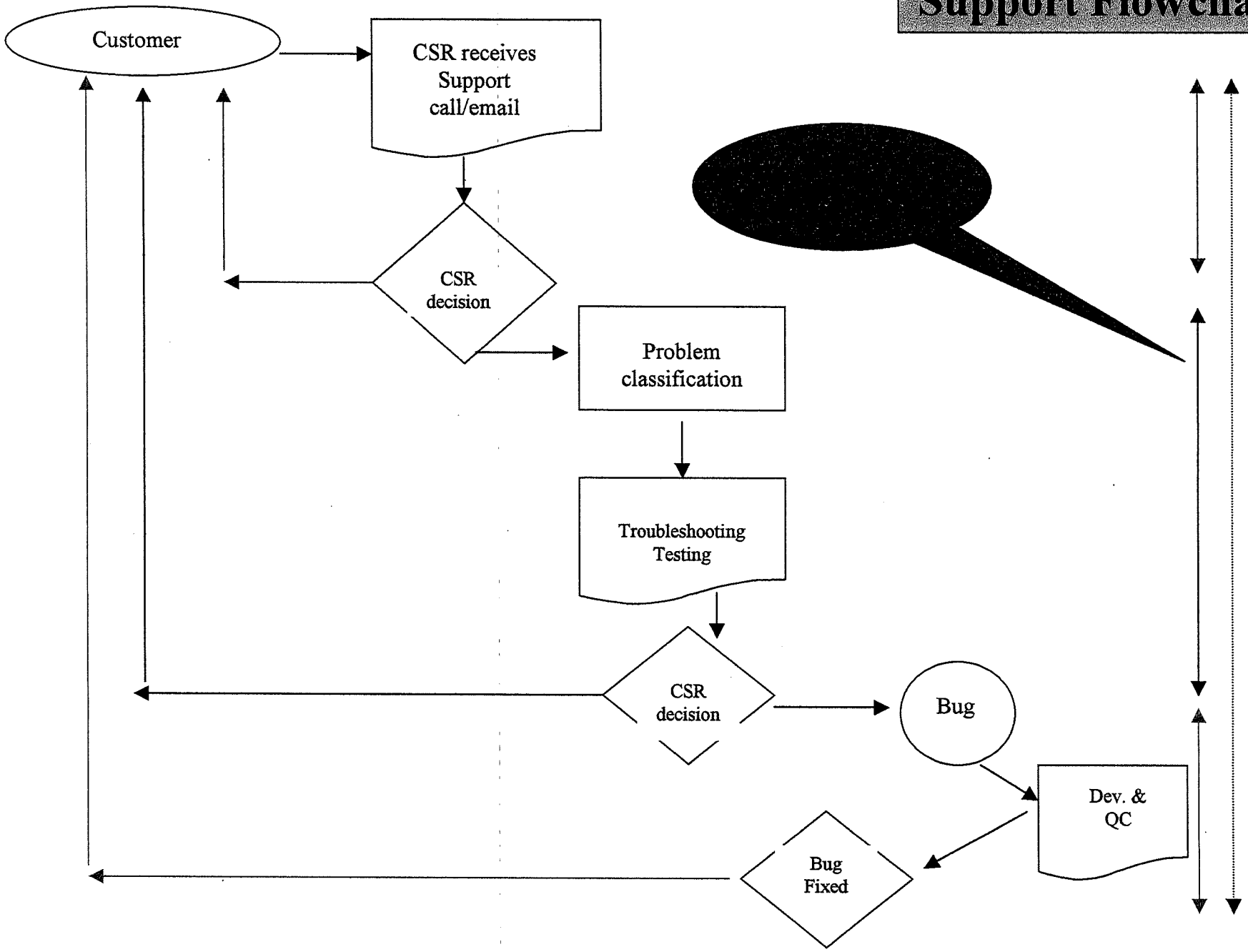

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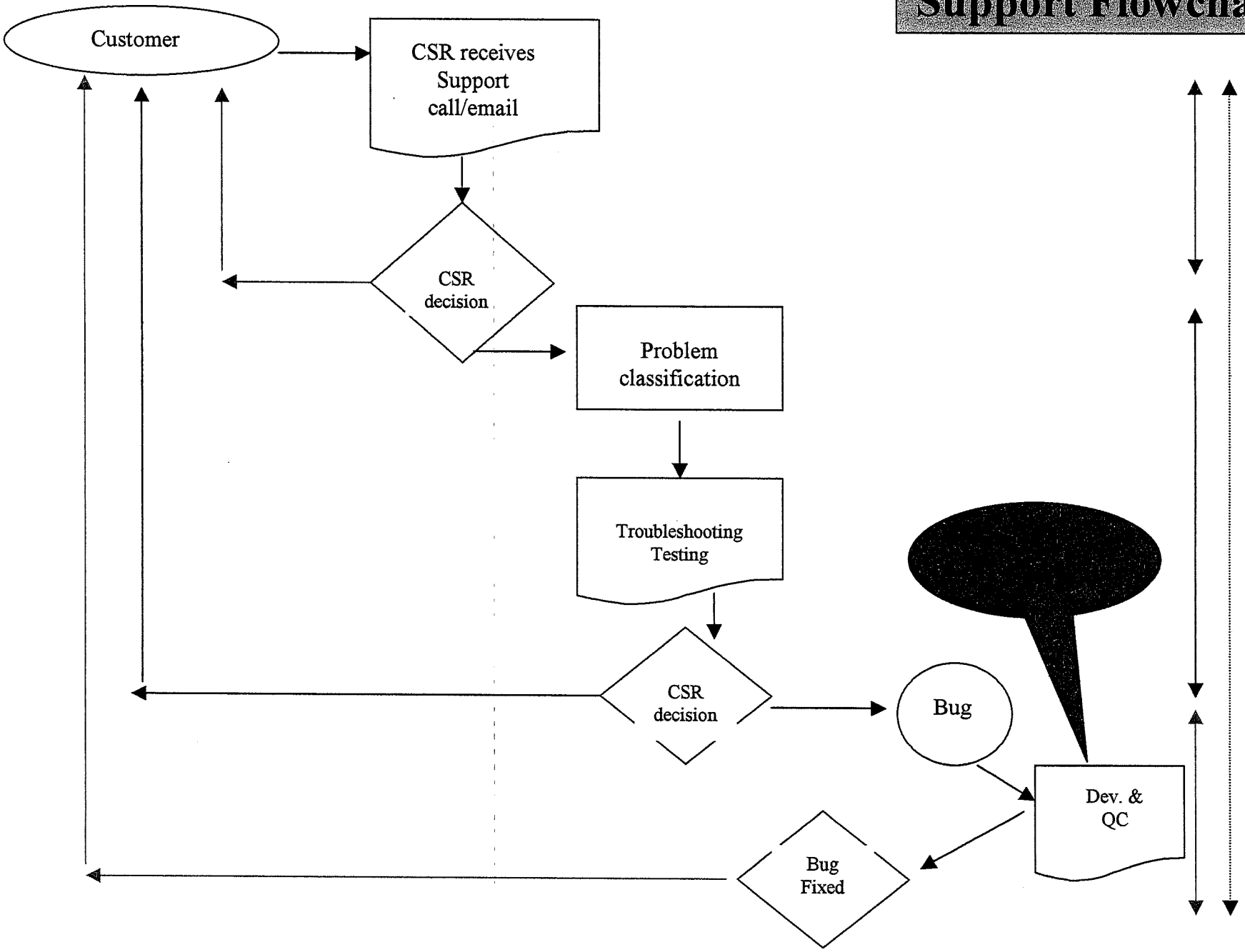

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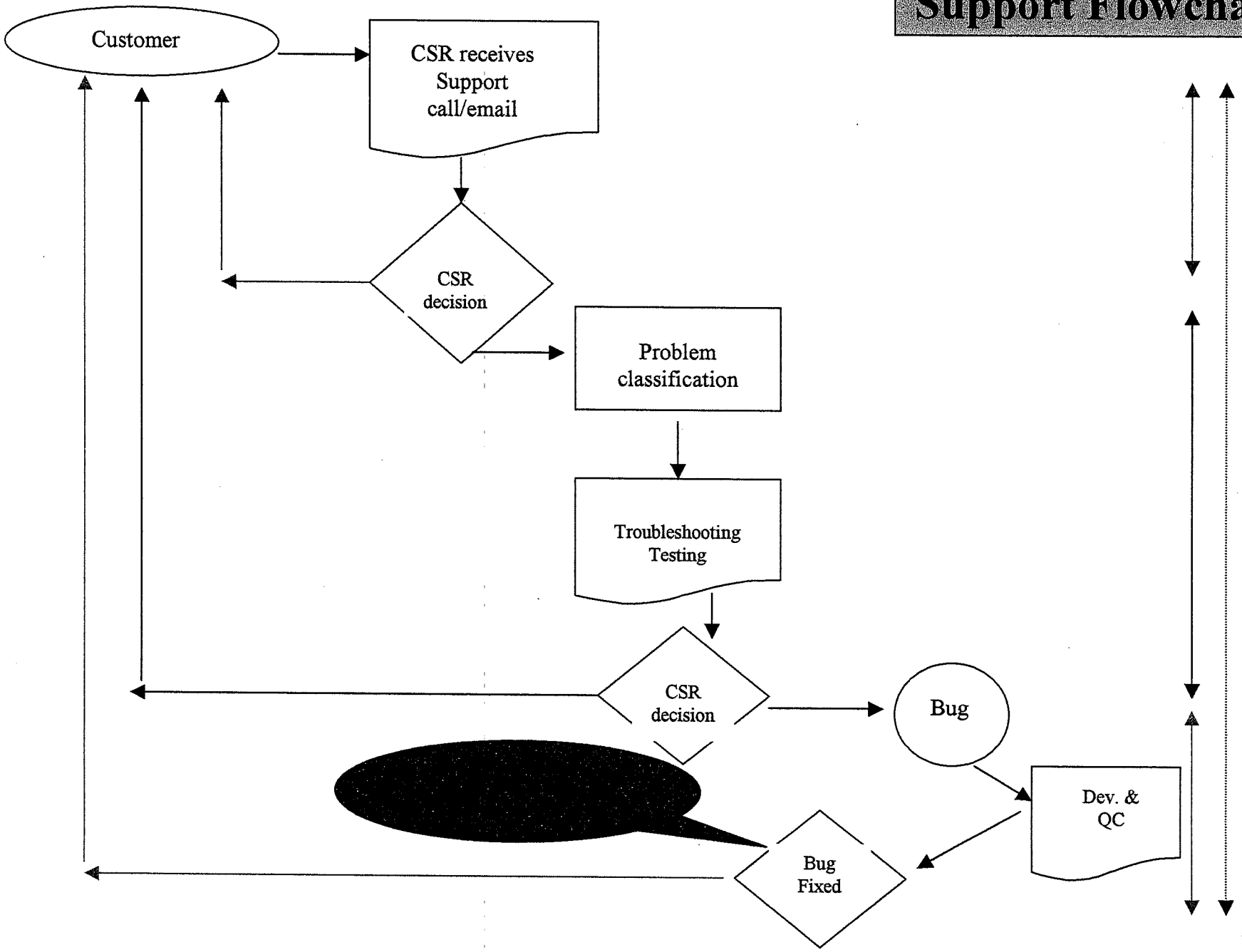

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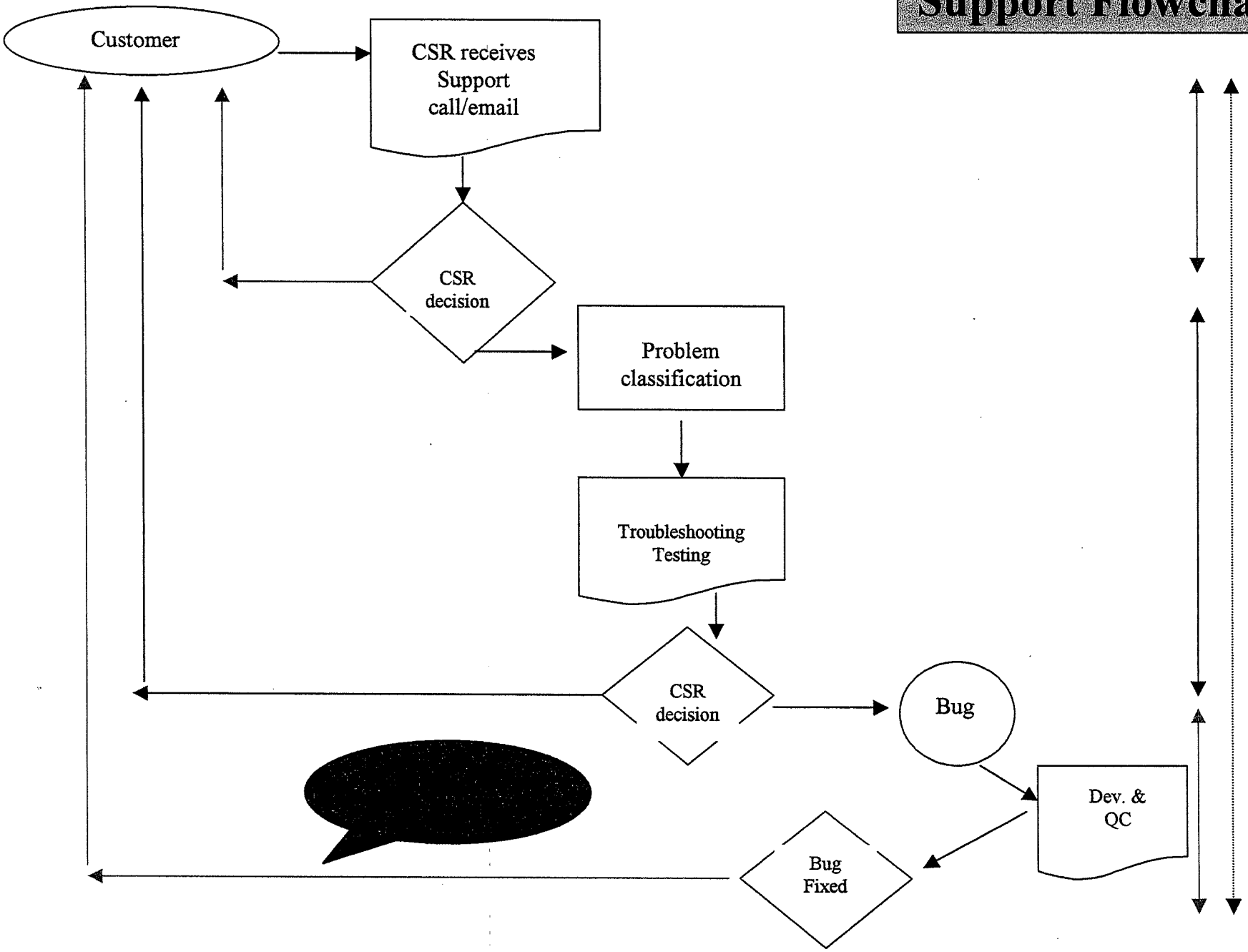

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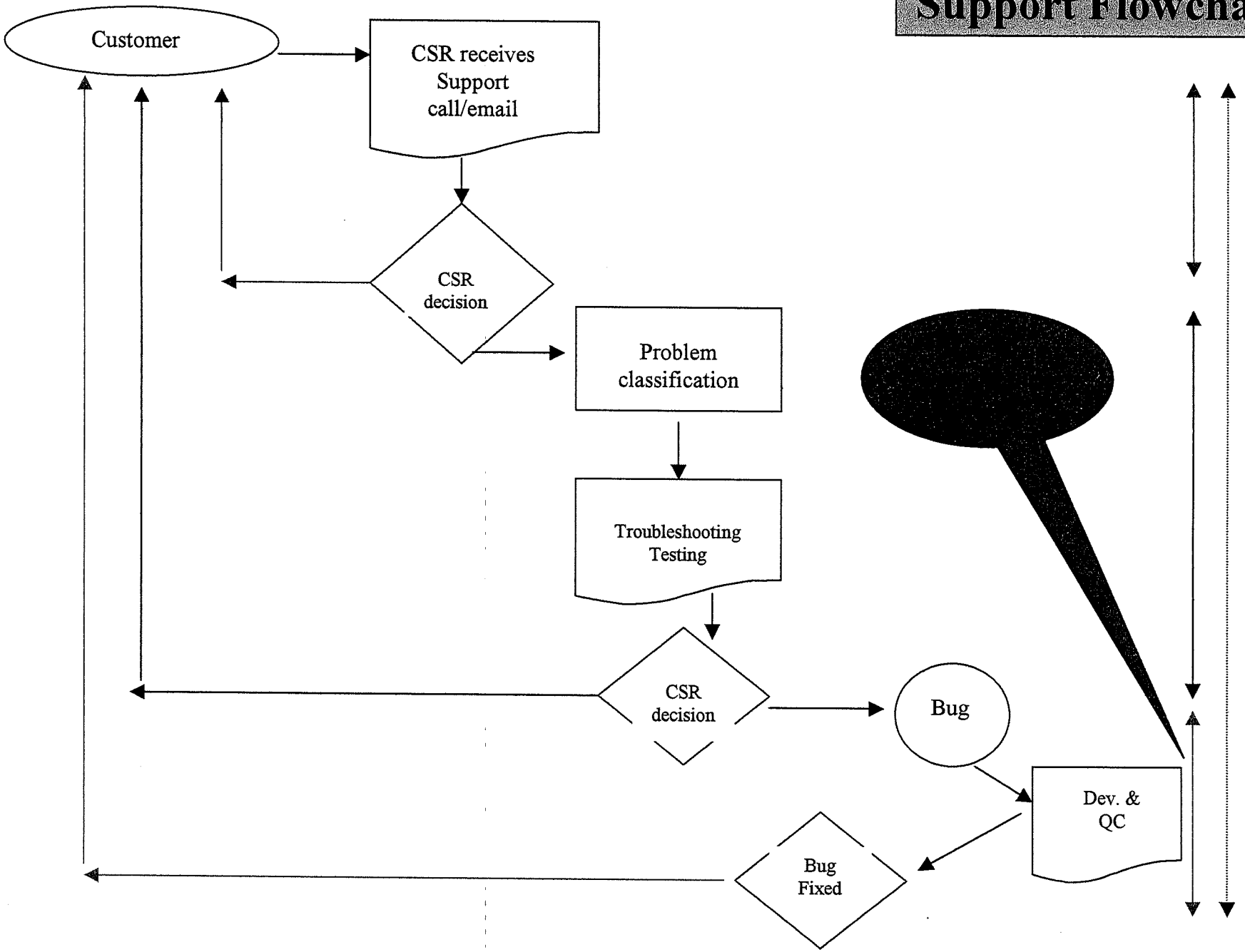
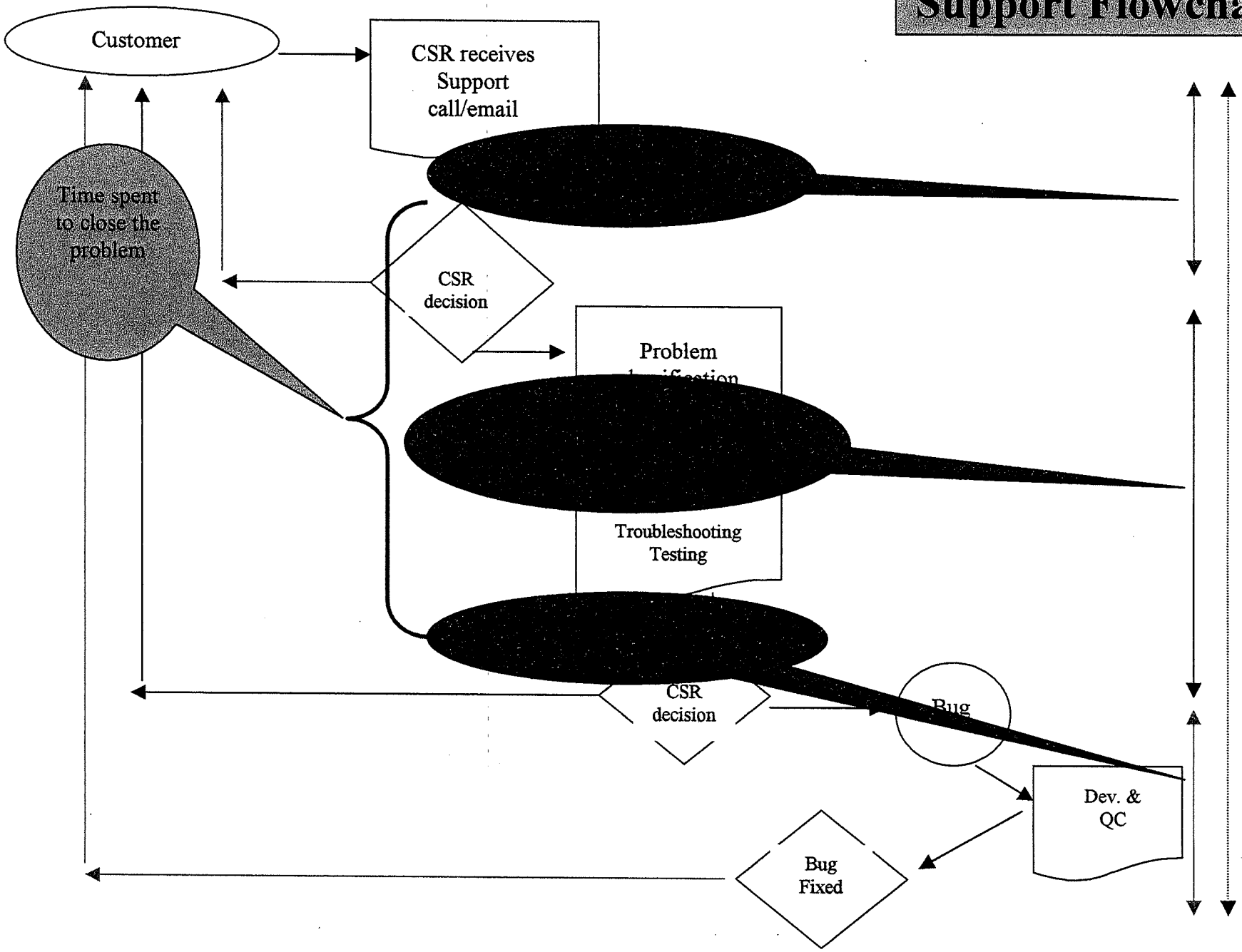


Support Flowchart



APPENDIX 3.4

VIRTUA REPORTS

VIRTUA

VTLS Inc.

Virtua ILS Statistics and Reporting

(April 2001)

Table of Contents

AVAILABLE REPORTS **4**

AVAILABLE REPORTS **4**

ACQUISITIONS **5**

- ACCOUNT SUMMARIES 5
- ACQUISITIONS AUDIT TRAIL 8
- ELECTRONIC ACCESS INFORMATION 11
- NEW BOOKS LIST 14
- ORDER STATUS 17
- TITLES ON ORDER 20
- VENDOR LIST 23
- VOUCHERS 26

CATALOGING **29**

- BIBLIOGRAPHIC RECORD LIST 29
- BROAD CATALOGING STATISTICS 30
- CATALOGING ERRORS 33

CIRCULATION **36**

- AVAILABILITY 36
- BASIC CIRCULATION STATISTICS 40
- BILLS 44
- CIRCULATION BY CALL NUMBER RANGE (IN DEVELOPMENT) 48
- CIRCULATION SNAPSHOT 49
- E-MAIL VALIDATION (IN DEVELOPMENT) 53
- EXPIRED REQUESTS (IN DEVELOPMENT) 54
- ITEMS BY STATUS 60
- ITEMS BY SUBJECT 64
- PATRON LIST (IN DEVELOPMENT) 65
- PATRON STATISTICS (IN DEVELOPMENT) 70
- OVERDUES 72
- RECALLS 76
- REQUESTED BILLS 80
- REQUESTED OVERDUES 83

Virtua ILS Statistics and Reporting

(April 2001)

Table of Figures

Figure 1 Account Summaries (HTML) 6
Figure 2 Account Summaries (E-mail Body) 7
Figure 3 Acquisitions Audit Trail (HTML) 9
Figure 4 Acquisitions Audit Trail (E-mail Body) 10
Figure 5 Electronic Access Information (HTML) 12
Figure 6 Electronic Access Information (E-mail Body) 13
Figure 7 New Books List (HTML) 15
Figure 8 New Books List (E-Mail Body) 16
Figure 9 Order Status (HTML) 18
Figure 10 Order Status (E-mail Body) 19
Figure 11 Titles on Order (HTML) 21
Figure 12 Titles on Order (E-mail Body) 22
Figure 13 Vendor List (HTML) 24
Figure 14 Vendor List (E-mail Body) 25
Figure 15 Vouchers (HTML) 27
Figure 16 Vouchers (E-mail Body) 28
Figure 17 Broad Cataloging Statistics (HTML) 31
Figure 18 Broad Cataloging Statistics (E-mail Body) 32
Figure 19 Cataloging Errors (HTML) 34
Figure 20 Cataloging Errors (E-mail Body) 35
Figure 21 Availability (HTML) 38
Figure 22 Availability (Tab-delimited Text File Viewed in Excel) 39
Figure 23 Basic Circulation Statistics (HTML) 41
Figure 24 Basic Circulation Statistics (E-mail Body) 42
Figure 25 Basic Circulation Statistic (Tab-delimited Text File Viewed in Excel) 43
Figure 26 Bills (HTML) 46
Figure 27 Bills (Tab-delimited Text File Viewed in Excel) 47
Figure 28 Circulation Snapshot (HTML) 50
Figure 29 Circulation Snapshot (E-mail Body) 51
Figure 30 Circulation Snapshot (Tab-delimited Text File Viewed in Excel) 52
Figure 31 Items by Status (HTML) 61
Figure 32 Items by Status (E-mail Body) 62
Figure 33 Items by Status (Tab-delimited Text File Viewed in Excel) 63
Figure 34 Patron List (HTML) 67
Figure 35 Patron List (E-mail Body) 68
Figure 36 Patron List (Tab-delimited Text File Viewed in Excel) 69
Figure 37 Patron Statistics (HTML) 70
Figure 38 Patron Statistics (E-mail Body) 71
Figure 39 Patron Statistics (Tab-delimited Text File Viewed in Excel) 71
Figure 40 Overdues (HTML) 74
Figure 41 Overdues (Tab-delimited Text File Viewed in Excel) 75
Figure 42 Recalls (HTML) 78
Figure 43 Recalls (Tab-delimited Text File Viewed in Excel) 79

Virtua ILS Statistics and Reporting

(April 2001)

Available Reports

Category	Report Title
Acquisitions	Account Summaries
	Acquisitions Audit Trail
	Electronic Access Information
	New Books List
	Order Status
	Titles on Order
	Vendor List
	Vouchers
Administrative	(in development)
Cataloging	Bibliographic Record List
	Broad Cataloging Statistics
	Cataloging Errors
Circulation	Availability
	Basic Circulation Statistics
	Bills
	Circulation By Call Number Range (in development)
	Circulation Snapshot
	E-mail Validation (in development)
	Expired Request (in development)
	Items by Status
	Items by Subject
	Overdues
	Patron List (in development)
	Patron Statistics (in development)
	Recalls
	Requested Bills
	Requested Overdues
OPAC	(in development)
Patron	(in development)
Serials	(in development)

Virtua ILS Statistics and Reporting

(April 2001)

Acquisitions

Account Summaries

Category	Acquisitions	
Report Title	Account Summaries	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Primary Sort	Account Name
		Account Number
		Allocation
		Distribution
		Encumbrance
		Expenditure
		Free Balance
		Parent Account Name
	Secondary Sort	Account Name
		Account Number
		Allocation
		Distribution
		Encumbrance
		Expenditure
		Free Balance
		Parent Account Name
Field Labels	Account Number	
	Account Name	
	Fiscal Year	
	Allocation	
	Distribution	
	Encumbrance	
	Encumbrance Total	
	Expenditure	
	Expenditure Total	
	Free Balance	
	Free Balance Total	
	Parent Account Name	

Account Summaries - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Account Summaries

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Fiscal Year 1999

Account Number			Account Name	
987787			Library budget	
Allocation	**Distribution**	**Encumbrance**	**Expenditure**	**Free Balance**
3,336,783.00	912.00	0.00	0.00	3,335,871.00

Account Number	Parent Account Name		Account Name	
121212	Library budget		Foreign Literature	
Allocation	**Distribution**	**Encumbrance**	**Expenditure**	**Free Balance**
456.00	0.00	0.00	0.00	456.00

Account Number	Parent Account Name	Account Name

Done Internet

Figure 1 Account Summaries (HTML)

Virtua Report Results: Account Summaries - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:02 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Account Summaries

Report: Account Summaries
Configuration Name: mktg test
Configuration Author: VTLS mktg

Fiscal Year: 1999

Account Name: Library budget
Account Number: 987787
Allocation: 3,336,783.00
Distribution: 912.00
Encumbrance: 0.00
Expenditure: 0.00
Free Balance: 3,335,871.00

Parent Account Name: Library budget
Account Name: Foreign Literature
Account Number: 121212
Allocation: 456.00
Distribution: 0.00
Encumbrance: 0.00
Expenditure: 0.00
Free Balance: 456.00

Parent Account Name: Library budget

Figure 2 Account Summaries (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Acquisitions Audit Trail

Category	Acquisitions	
Report Title	Acquisitions Audit Trail	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Start Date	
	End Date	
	Primary Sort	Account Number
		Amount
		Operator ID
		Date
		Transaction Type
	Secondary Sort	Account Number
		Amount
		Operator ID
		Date
		Transaction Type
		Account Number
Field Labels	Account Created	
	Account Encumbered	
	Account Disencumbered	
	Account Expended	
	Deposit Account Created	
	Account Allocation Modified	
	Fund Transfer	
	Account Number	
	Amount	
	Operator ID	
	Date	
	Transaction Type	

Acquisitions Audit Trail - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Acquisitions Audit Trail

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Date	Operator ID	Transaction Type	Amount	Account Number
02-NOV-1999	0	Account Encumbered	USD 45.00	8
02-NOV-1999	0	Account Encumbered	USD 45.70	8
02-NOV-1999	0	Account Encumbered	USD 69.00	7
02-NOV-1999	0	Account Encumbered	USD 276.00	8
02-NOV-1999	0	Account Encumbered	USD 65.45	8
02-NOV-1999	0	Account Encumbered	USD 235.65	8
02-NOV-	0	Account Disencumbered	USD 69.00	7

Done Internet

Figure 3 Acquisitions Audit Trail (HTML)

Virtua Report Results: Acquisitions Audit Trail - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:05 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Acquisitions Audit Trail

Report: Acquisitions Audit Trail
Configuration Name: mktg test
Configuration Author: VTLS mktg

Date: 02-NOV-1999
Operator ID: 0
Transaction Type: Account Encumbered
Amount: USD 45.00
Account Number: 8

Date: 02-NOV-1999
Operator ID: 0
Transaction Type: Account Encumbered
Amount: USD 45.70
Account Number: 8

Date: 02-NOV-1999
Operator ID: 0
Transaction Type: Account Encumbered
Amount: USD 69.00
Account Number: 7

Date: 02-NOV-1999
Operator ID: 0

Figure 4 Acquisitions Audit Trail (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Electronic Access Information

Category	Acquisitions	
Report Title	Electronic Access Information	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Record Type	Bibliographic Records
		Holdings Record
Field Labels	Record Type	
	ID	
	URL	

Electronic Access Information - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Electronic Access Information

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Bibliographic Records

ID	URL
8408	http://www.vtls.com/newpress.html
11330	xyz
11330	xyz
788862	http://www.tarzan.com/wb-bhb.gif
789092	C:/multimedia/jsmith.jpg
789092	http://www.vtls.com/test/imagedemo/jsmith.jpg
789173	http://www.tarzan.com/ob-mmat.gif
789178	http://www.tarzan.com/tb-bta.gif
789181	http://www.tarzan.com/tb-la.gif
789183	http://www.tarzan.com/wb-ad.gif

Internet

Figure 5 Electronic Access Information (HTML)

Virtua Report Results: Electronic Access Information - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:06 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Electronic Access Information

Report: Electronic Access Information
Configuration Name: mktg test
Configuration Author: VTLS mktg

Bibliographic Records

ID: 8408
URL: http://www.vtls.com/newpress.html

ID: 11330
URL: xyz

ID: 11330
URL: xyz

ID: 788862
URL: http://www.tarzan.com/wb-bhb.gif

ID: 789092
URL: C:/multimedia/jsmith.jpg

ID: 789092
URL: http://www.vtls.com/test/imagedemo/jsmith.jpg

Figure 6 Electronic Access Information (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

New Books List

Category	Acquisitions	
Report Title	New Books List	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Primary Sort	Author
		Title
		Publisher
		Date
	Secondary Sort	Author
		Title
		Publisher
		Date
Field Labels	Bib ID	
	Author	
	Title	
	Publisher	
	Date	

New Books List - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address l/yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

New Books List

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Author	Title	Publisher	Date
Aaron, Richard Ithamar,	The Theory Of Universals.	Oxford [Eng.] Clarendon Press,	1952.
Abramson, Norman,	Computer-Communication Networks,	Englewood Cliffs, N.J., Prentice-Hall	[1973]
Aceves, Joseph B.	Social Change In A Spanish Village	Cambridge, Mass., Schenkman Pub. Co.	c1971.
Anderson, Robert Thomas,	The Vanishing Village, A Danish Maritime Community,	Seattle, University of Washington Press,	1964.
Atherton,	Stability Of Nonlinear Systems	Chichester	c1981.

Done Internet

Figure 7 New Books List (HTML)

Virtua Report Results: New Books List - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:10 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: New Books List

Report: New Books List
Configuration Name: mktg test
Configuration Author: VTLS mktg

Bib ID: 6046
Author: Aaron, Richard Ithamar,
Title: The Theory Of Universals.
Publisher: Oxford [Eng.] Clarendon Press,
Date: 1952.

Bib ID: 9207
Author: Abramson, Norman,
Title: Computer-Communication Networks,
Publisher: Englewood Cliffs, N.J., Prentice-Hall
Date: [1973]

Bib ID: 7594
Author: Aceves, Joseph B.
Title: Social Change In A Spanish Village
Publisher: Cambridge, Mass., Schenkman Pub. Co.
Date: c1971.

Bib ID: 4141
Author: Anderson, Robert Thomas

Figure 8 New Books List (E-Mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Order Status

Category	Acquisitions	
Report Title	Order Status	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Order Status	Incomplete
		Need Approval
		Hold
		Approved
		Ordered
		To Be Canceled
	Group By Column	Account Name
		Account Number
		Location
		Order Status
		Subject ID
		Vendor Name
	Primary Sort	Account Name
		Account Number
		Location
		Order Status
		Subject ID
		Vendor Name
	Secondary Sort	Account Name
		Account Number
		Location
		Order Status
		Subject ID
		Vendor Name
Field Labels	Account Name	
	Account Number	
	Date Created	
	Location	
	Order Detail	
	Order ID	
	Order Status	
	Quantity Ordered	
	Subject ID	
	Title	
	Vendor Name	

Order Status - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Order Status

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

ART COLLEGE

Location: Central Library - 10000 **Title:** Music And Coffee **Subject ID:** 3

Order Detail:

Order ID: 622 - 1
Account Name: ART COLLEGE - 81 **Date Created:** 27-NOV-2000
Vendor Name: ABC Book Center **Quantity Ordered:** 2
Order Status: Ordered - 5

Location: Central Library - 10000 **Title:** U Can'T Touch This (Animated) **Subject ID:** 14

Order Detail:

Order ID: 587 - 1
Account Name: ART COLLEGE - 81 **Date Created:** 27-NOV-2000
Vendor Name: ABC Book Center **Quantity Ordered:** 1
Order Status: Ordered - 5

Done Internet

Figure 9 Order Status (HTML)

Virtua Report Results: Order Status - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:11 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Order Status

Report: Order Status
Configuration Name: mktg test
Configuration Author: VTLS mktg

ART COLLEGE

Location: Central Library - 10000
Title: Music And Coffee
Subject ID: 3
Account Name: ART COLLEGE
Account Number: 81
Vendor Name: ABC Book Center
Order ID: 622 - 1
Date Created: 27-NOV-2000
Quantity Ordered: 2
Order Status: Ordered - 5

Location: Central Library - 10000
Title: U Can'T Touch This (Animated)
Subject ID: 14
Account Name: ART COLLEGE
Account Number: 81
Vendor Name: ABC Book Center

Figure 10 Order Status (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Titles On Order

Category	Acquisitions	
Report Title	Titles On Order	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Primary Sort	Vendor
		Vendor ID
		Title
		PO
		Cost
		Due Date
	Secondary Sort	Vendor
		Vendor ID
		Title
		PO
		Cost
		Due Date
Field Labels	Vendor	
	Vendor ID	
	Title	
	PO	
	Line	
	Cost	
	Due Date	
	Quantity Ordered	
	Quantity Received	

Titles on Order - Microsoft Internet Explorer

File Edit View Favorites Tools Help | Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en | Go

Back Search Favorites History Links

VIRTUA

Titles on Order

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

ABC Book Center 63

Aid And Development; **PO/Line:** 590/1

Cost: USD 0.00 **Due Date:** 27-NOV-2000 **Quantity Ord'd/Rec'd:** 1/0

Aid And Development; **PO/Line:** 11272/2

Cost: USD 0.00 **Due Date:** 27-NOV-2000 **Quantity Ord'd/Rec'd:** 1/0

Approaches To Teaching The Novels Of Toni Morrison **PO/Line:** 548/1

Cost: USD 10.00 **Due Date:** 27-NOV-2000 **Quantity Ord'd/Rec'd:** 1/0

Done Internet

Figure 11 Titles on Order (HTML)

Virtua Report Results: Titles on Order - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:13 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Titles on Order

Report: Titles on Order
Configuration Name: mktg test
Configuration Author: VTLS mktg

Vendor: ABC Book Center 63
Title: Aid And Development;
PO/Line: 590/1
Cost: USD 0.00
Due Date: 27-NOV-2000
Quantity Ord'd/Rec'd: 1/0

Vendor: ABC Book Center 63
Title: Aid And Development;
PO/Line: 11272/2
Cost: USD 0.00
Due Date: 27-NOV-2000
Quantity Ord'd/Rec'd: 1/0

Vendor: ABC Book Center 63
Title: Approaches To Teaching The Novels Of Toni Morrison
PO/Line: 548/1
Cost: USD 10.00
Due Date: 27-NOV-2000
Quantity Ord'd/Rec'd: 1/0

Figure 12 Titles on Order (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Vendor List

Category	Acquisitions	
Report Title	Vendor List	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Primary Sort	Control Number
		Vendor ID
		Vendor Name
		Vendor Type
		City
		State
		Postal Code
		Country
	Secondary Sort	Control Number
		Vendor ID
		Vendor Name
		Vendor Type
		City
		State
		Postal Code
		Country
Field Labels	Control Number	
	Vendor ID	
	Vendor Name	
	City	
	State	
	Postal Code	
	Country	
	Telephone	
	Fax	
	Vendor Type	

Vendor List - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Vendor List

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Vendor ID	Control Number	Vendor Type	Vendor Name	
83			A-ZON publishing Company	Chung shing Rd., Chang-Hwa 525
63			ABC Book Center	Kraft DC., New Jersey
30			Academic Book Center	5600 NE Hassalo, Portland, OR 97213
78			Academic Publisher	1800 Kraft Dr., Blacksburg, Montgomery County, VA. 24060
35			Akateeminen kirjakauppa	PL 128 (Keskuskatu 1), Helsinki 00101
44			Alfred Jaeger, Inc.	66 Austin Blvd., Commack, NY 11725-9009
14			Alfred Jaeger, Inc.	66 Austin Blvd., Commack, NY 11725-9009
37			Allen & Unwin	somewhere Stree, Sydney

Done Internet

Figure 13 Vendor List (HTML)

Virtua Report Results: Vendor List - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:15 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Vendor List

Report: Vendor List
Configuration Name: mktg test
Configuration Author: VTLS mktg

Vendor ID: 83
Control Number:
Vendor Type:
Vendor Name: A-ZON publishing Company
Street Address: Chung shing Rd.
City: Chang-Hwa
County:
State:
Postal Code: 525
Country:
Telephone:
FAX:

Vendor ID: 63
Control Number:
Vendor Type:
Vendor Name: ABC Book Center
Street Address: Kraft DC.
City: New Jersey
County:

Figure 14 Vendor List (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Vouchers

Category	Acquisitions	
Report Title	Vouchers	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Vendor Name	
	Start Date	
	End Date	
Field Labels	Vendor Name	
	Vendor ID	
	Date Paid	
	Voucher ID	
	Invoice ID	
	PO ID	
	Amount	
	Converted Amount	
	Voucher Total	
	Type	
	Payment	
	Credit	

Vouchers - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Vouchers

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Vendor Name: Ebsco Vendor - 2

Voucher ID: 6 **31-MAR-2000**

Type	Invoice ID	PO ID	Amount	Converted Amount
Payment	serial	170	USD 25.00	25.00
				Voucher Total: 25.00

Voucher ID: 10 **31-MAR-2000**

Type	Invoice ID	PO ID	Amount	Converted Amount
Payment	serial1	171	USD 10.00	10.00
				Voucher Total: 10.00

Voucher ID: 7 **31-MAR-2000**

Type	Invoice ID	PO ID	Amount	Converted Amount
Payment	e1	172	USD 10.00	10.00
				Voucher Total: 10.00

Done Internet

Figure 15 Vouchers (HTML)

Virtua Report Results: Vouchers - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:16 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Vouchers

Report: Vouchers
Configuration Name: mktg test
Configuration Author: VTLS mktg

Vendor Name: Ebsco Vendor - 2

Type: Payment
Date Paid: 31-MAR-2000
Voucher ID: 6
Invoice ID: serial
PO ID: 170
Amount: USD 25.00
Converted Amount: 25.00

Voucher Total: 25.00

Type: Payment
Date Paid: 31-MAR-2000
Voucher ID: 10
Invoice ID: serial1
PO ID: 171
Amount: USD 10.00

Figure 16 Vouchers (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Cataloging

Bibliographic Record List

Category	Cataloging	
Report Title	Bibliographic Record List	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Call Number Ranges(for up to 5 per specific report)	Start
		End
		All Bibliographic Records
		Bibliographic Records That Have Items Attached
		Bibliographic Records Without Items Attached
		Bibliographic Records That Have Items That Have Circulated
	Item Conditions	Minimum Circulation
		Maximum Circulation
	Locations	
	Creation Date Range	Start
		End
	Publication Date Range	Start
		End
	Type	
	Bibliographic Level	
	Language Code	
	Templates	
	MARC Tag List	
Field Labels	Bibliographic Call Number	
	Item Class	
	Item Barcode	
	Location	
	Item Call Number	
	Copy	
	Circulation Count	

No sample report available at this time.

Virtua ILS Statistics and Reporting

(April 2001)

Broad Cataloging Statistics

Category	Cataloging	
Report Title	Broad Cataloging Statistics	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Start Date	
	End Date	
	From	
	To	
Field Labels	Bibliographic Records	
	Authority Records	
	Community Information Records	
	Item Records	
	Holdings Records	
	Total	
	Added	
	Modified	

Broad Cataloging Statistics - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Broad Cataloging Statistics

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

From 01-NOV-1999 To 31-OCT-2000

Bibliographic Records	
Total	12,447
Added	1,786
Modified	349
Authority Records	
Total	50,153
Community Information Records	
Total	2
Added	0

Done Internet

Figure 17 Broad Cataloging Statistics (HTML)

Virtua Report Results: Broad Cataloging Statistics - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:20 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Broad Cataloging Statistics

Report: Broad Cataloging Statistics
Configuration Name: mktg test
Configuration Author: VTLS mktg

From 01-NOV-1999 To 31-OCT-2000

Total Bibliographic Records: 12,448
Added Bibliographic Records: 1,786
Modified Bibliographic Records: 349
Total Authority Records: 50,153
Total Community Information Records: 2
Added Community Information Records: 0
Modified Community Information Records: 0
Total Item Records: 18,948
Added Item Records: 101
Modified Item Records: 247
Total Holdings Records: 367
Added Holdings Records: 35
Modified Holdings Records: 30

Figure 18 Broad Cataloging Statistics (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Cataloging Errors

Category	Cataloging	
Report Title	Cataloging Errors	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Virtua User	
	Start Date	
	End Date	
Field Labels	Authority Record	
	Bibliographic Record	
	ID Type Code	
	ID Type Name	
	Record ID	
	Record Type	
	Virtua User	
	Diagnostic Text	

Cataloging Errors - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Cataloging Errors

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Record Type: Authority Record

Record ID	Virtua User	Diagnostic Text
1990	staff	WARNING -- POSSIBLE AUTHOR HEADING DUPLICATION: Rossetti, Dante Gabriel, $d 1828-1882 WARNING - NEW AUTHOR HEADING ENTRY: Rossetti, Dante Gabriel, $d 1828-1882

Record ID	Virtua User	Diagnostic Text
5123	staff	AUTHORITY UPDATED =000000512300 Fleming, Denna Frank, $d 1893-

Record ID	Virtua User	Diagnostic Text
15782	staff	WARNING - NEW AUTHOR HEADING ENTRY:

Done Internet

Figure 19 Cataloging Errors (HTML)

Virtua Report Results: Cataloging Errors - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:21 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Cataloging Errors

Report: Cataloging Errors
Configuration Name: mktg test
Configuration Author: VTLS mktg

Record Type: Authority Record

Record ID: 1990
: 1
Virtua User: staff
WARNING -- POSSIBLE AUTHOR HEADING DUPLICATION:
Rossetti, Dante Gabriel, $d 1828-1882
WARNING - NEW AUTHOR HEADING ENTRY:
Rossetti, Dante Gabriel, $d 1828-1882

Record ID: 5123
: 1
Virtua User: staff
AUTHORITY UPDATED =000000512300
Fleming, Denna Frank, $d 1893-

Record ID: 15782
: 1
Virtua User: staff

Figure 20 Cataloging Errors (E-mail Body)

Circulation

Availability

Category	Circulation	
Report Title	Availability	
Output Format	HTML	
	E-mail, Primary (38)	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Location	
	Patron Type	
	Notice Number to Generate	
	Delimiter	
	Primary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Secondary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Tertiary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)

		Patron Postal Code (33)
		College or School (43)
	Update Database	
	Honor Language Preference	
	Honor Address Preference	
	Available Items Found	
	Date Format	DD-MM-YYYY
Field Labels	Patron Start Flag	
	Available Items Found	
	Report Date (1)	
	Item ID (8)	
	Barcode (9)	
	Item Class Code (10)	
	Item Class (11)	
	Shelf Location Code (12)	
	Shelf Location (13)	
	Main Location (14)	
	Item Units (15)	
	Copy Number (16)	
	Item Price (17)	
	Call Number (18)	
	Call Number Sortkey (19)	
	Patron ID (20)	
	Patron Barcode (21)	
	Address Preference Flag (22)	
	Patron Type Code (23)	
	Patron Type (24)	
	Patron Full Name (25)	
	Patron Personal Name (26)	
	Patron First Name	
	Patron Last Name	
	Patron Name Prefix (27)	
	Patron Name Suffix (28)	
	Attention Of (29)	
	Patron Street Address 1 (30)	
	Patron Street Address 2 (31)	
	Patron Street Address 3 (32)	
	Patron Postal Code (33)	
	Patron City (34)	
	Patron County (35)	
	Patron State (36)	
	Patron Country (37)	
	E-mail, Primary (38)	
	E-mail, Secondary (39)	
	Language Preference (40)	
	Home Library (41)	
	Institution (42)	
	College or School (43)	
	Department (44)	
	Class or Homeroom (64)	
	Patron Primary Telephone (45)	
	Patron Secondary Telephone (46)	

	Patron Primary Specialized Telephone (47)	
	Patron Secondary Specialized Telephone (48)	
	FAX, Primary (49)	
	FAX, Secondary (50)	
	Full Patron Record (MARC) (51)	
	Processing Fee (52)	
	Holdings ID (53)	
	Holdings Units (54)	
	Hold Request Type (55)	
	Pickup Location Code (56)	
	Pickup Location Name (57)	
	Hold Expiration Date (58)	
	Bibliographic Record ID (60)	
	Part Title (61)	
	Author (62)	
	Title (63)	

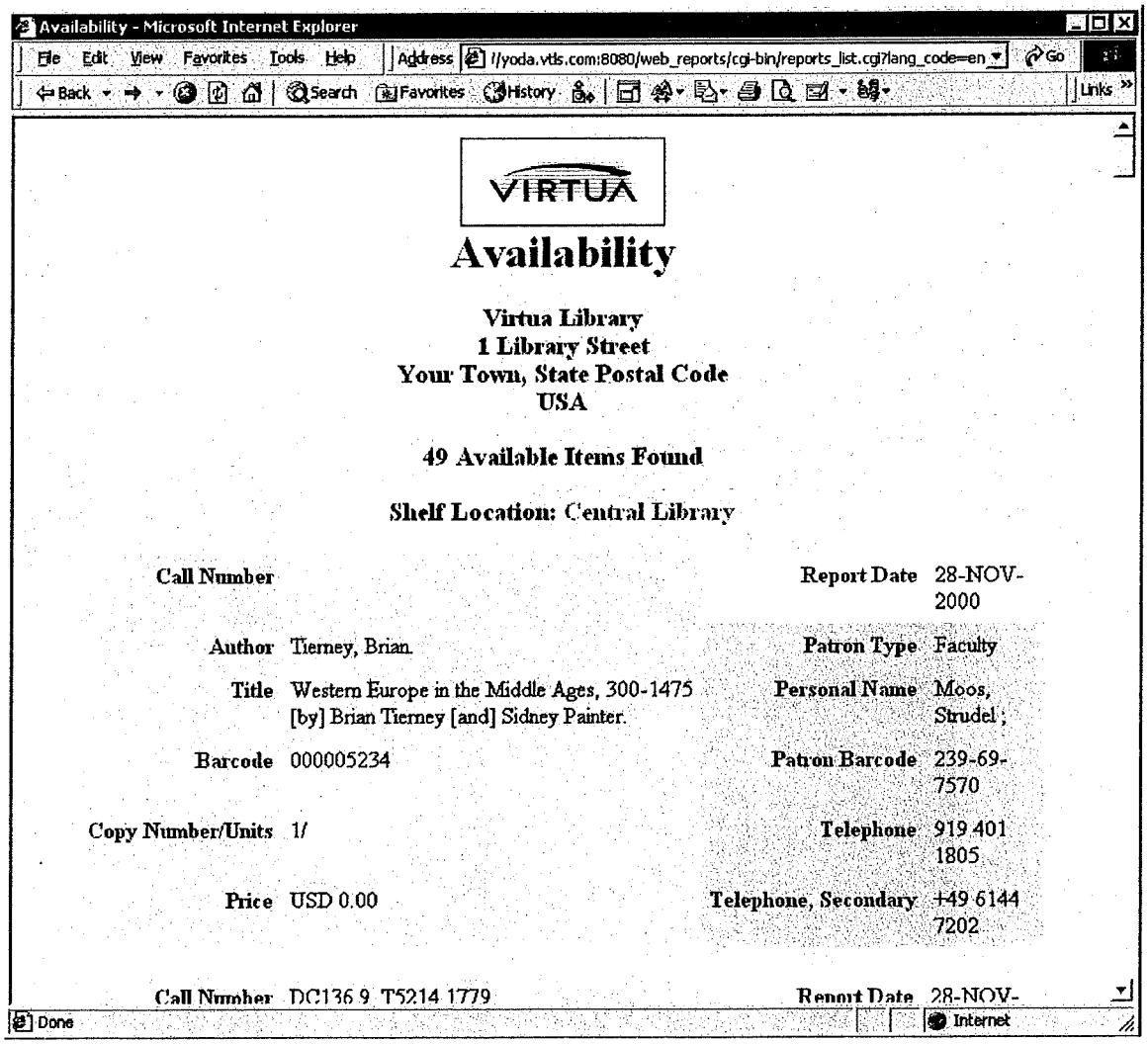


Figure 21 Availability (HTML)

Microsoft Excel - Availability.txt [Read-Only]

File Edit View Insert Format Tools Data Window Help

Arial 10 100%

A1 Patron Start Flag

	A	B	C	D	E	F	G	H	I	J	K	L
1	Patron Start Flag	Available Items Found	Report Date	Barcode	Item Class	Shelf Location Code	Shelf Location	Units	Copy Number	Price	Call Numb	Call N
2	1	49	28-Nov-00	6234	Books	10000	Central Library		1	USD 0.00		
3		49	28-Nov-00	543532	Books	10000	Central Library		2	USD 0.00	DC136.9 .	DC01
4		49	28-Nov-00	14080	Books	10000	Central Library		1	USD 0.00	HC110.E5	HC01
5	1	49	28-Nov-00	45	Books	10000	Central Library		0	USD 0.00		
6	1	49	28-Nov-00	1001001002	Books	10000	Central Library		0	USD 0.00		
7	1	49	28-Nov-00	1001001005	Books	10000	Central Library		0	USD 0.00		
8	1	49	28-Nov-00	4672	Books	10000	Central Library		1	USD 0.00	E178 .W	E017
9		49	28-Nov-00	5965	Books	10000	Central Library		1	USD 0.00	NK480.F5	NK04
10	1	49	28-Nov-00	15650	Books	10000	Central Library		1	USD 0.00		
11	1	49	28-Nov-00	12457	Books	10000	Central Library		1	USD 0.00		
12		49	28-Nov-00	17306	Books	10000	Central Library		1	USD 0.00	NE850 .F	NE08
13	1	49	28-Nov-00	412	Books	10000	Central Library		1	USD 0.00	B132.Y6	B0132
14		49	28-Nov-00	1000007814	Books	10000	Central Library		1	USD 0.00	QE721 .J	QE07
15	1	49	28-Nov-00	2065	Books	10000	Central Library		1	USD 0.00		
16		49	28-Nov-00	10838	Books	10000	Central Library		1	USD 0.00	BF698 .S	BF065
17		49	28-Nov-00	11095	Books	10000	Central Library		1	USD 0.00	PG3012 .	PG30
18	1	49	28-Nov-00	16556	Books	10000	Central Library		1	USD 0.00	B821 .G7	B0821
19		49	28-Nov-00	31	Books	10000	Central Library		1	USD 0.00	CB19 .C5	CB00
20		49	28-Nov-00	7232	Books	10000	Central Library		1	USD 0.00	PN1998.A	PN19
21	1	49	28-Nov-00	98989	Books	10000	Central Library		1	USD 0.00		
22		49	28-Nov-00	16476	Books	10000	Central Library		1	USD 0.00	N6260 .K	N6260
23	1	49	28-Nov-00	17587	Books	10000	Central Library		1	USD 0.00	AC8 .W2	AC00
24		49	28-Nov-00	11180	Books	10000	Central Library		1	USD 0.00	BR1006 .	BR10
25		49	28-Nov-00	6349	Books	10000	Central Library		1	USD 0.00	JS2408 .4	JS240
26		49	28-Nov-00	4088	Books	10000	Central Library		1	USD 0.00	TA365 .S	TA03
27		49	28-Nov-00	94894332	Books	10000	Central Library		1	USD 0.00	TD755 .M	TD07
28		49	28-Nov-00	6494	Books	10000	Central Library		1	USD 0.00	Z7164.I7	Z7164
29	1	49	28-Nov-00	78	Books	10000	Central Library		2	USD 0.00	BX8667 .R	BX86
30	1	49	28-Nov-00	19712	Books	10000	Central Library		1	USD 0.00	E340.U6	E034
31		49	28-Nov-00	2464	Books	10000	Central Library		1	USD 0.00	HC106.3	HC01
32	1	49	28-Nov-00	2240	Books	10000	Central Library		1	USD 0.00	JS5488 .J	JS548
33	1	49	28-Nov-00	90876654	Books	10000	Central Library		1	USD 0.00		
34		49	28-Nov-00	km8888	Books	10000	Central Library		0	USD 0.00	abc ewerre	ABC01

Availability

Ready NUM

Figure 22 Availability (Tab-delimited Text File Viewed in Excel)

Virtua ILS Statistics and Reporting

(April 2001)

Basic Circulation Statistics

Category	Circulation	
Report Title	Basic Circulation Statistics	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Transaction Types	Regular Checkouts
		In-house Checkouts
		Fixed Date Checkouts
		Selected Date Checkouts
		Materials Booking Checkouts
	Location	
	Item Class	
	Patron Type	
	Start Date	
	End Date	
	Calculate Percent of Patron Type	
	Calculate Percent of Item Class	
Field Labels	Date Range	
	Item Class	
	Location	
	Patron Type	
	Transaction Type	

Basic Circulation Statistics - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Basic Circulation Statistics

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Regular Checkouts

Central Library: 01-nov-2000 - 31-oct-2001

	Academic	AD	Faculty	LI	Student	UG	fa	fc	Total
Books	1 (100.0%)		27 (93.1%)		1 (100.0%)				29 (100.0%)
CD ROM									
Compact Disc									
Journals			1 (3.4%)						1 (100.0%)
Manuscript									
Music Score									
Reserves			1 (3.4%)						1 (100.0%)
Software									

Done Internet

Figure 23 Basic Circulation Statistics (HTML)

Basic Circulation Statistics - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:28 PM
To: martinr@vtls.com
Cc:
Subject: Basic Circulation Statistics

Report: Basic Circulation Statistics
Configuration Name: mktg test
Configuration Author: VTLS mktg

Central Library
01-nov-2000 - 31-oct-2001

Item Class: Books, Patron Type: Academic, Regular Checkouts: 1
Item Class: Books, Patron Type: AD, Regular Checkouts: 0
Item Class: Books, Patron Type: Faculty, Regular Checkouts: 27
Item Class: Books, Patron Type: LI, Regular Checkouts: 0
Item Class: Books, Patron Type: Student, Regular Checkouts: 1
Item Class: Books, Patron Type: UG, Regular Checkouts: 0
Item Class: Books, Patron Type: fa, Regular Checkouts: 0
Item Class: Books, Patron Type: fc, Regular Checkouts: 0
Books Total: 29

Item Class: CD ROM, Patron Type: Academic, Regular Checkouts: 0
Item Class: CD ROM, Patron Type: AD, Regular Checkouts: 0
Item Class: CD ROM, Patron Type: Faculty, Regular Checkouts: 0
Item Class: CD ROM, Patron Type: LI, Regular Checkouts: 0
Item Class: CD ROM, Patron Type: Student, Regular Checkouts: 0
Item Class: CD ROM, Patron Type: UG, Regular Checkouts: 0
Item Class: CD ROM, Patron Type: fa, Regular Checkouts: 0

Figure 24 Basic Circulation Statistics (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Microsoft Excel - Basic Circulation Statistics.xlsx [Read-Only]

File Edit View Insert Format Tools Data Window Help

A1 Location

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Location	Start Date	End Date	Transaction Type	Item Class	Academic	AD	Faculty	LI	Student	UG	fa	fc			
2	Central Library	1-Nov-00	31-Oct-01	Regular Checkouts	Books	1	0	27	0	1	0	0	0			
3	Central Library	1-Nov-00	31-Oct-01	Regular Checkouts	CD ROM	0	0	0	0	0	0	0	0			
4	Central Library	1-Nov-00	31-Oct-01	Regular Checkouts	Compact Disc	0	0	0	0	0	0	0	0			
5	Central Library	1-Nov-00	31-Oct-01	Regular Checkouts	Journals	0	0	1	0	0	0	0	0			
6	Central Library	1-Nov-00	31-Oct-01	Regular Checkouts	Manuscript	0	0	0	0	0	0	0	0			
7	Central Library	1-Nov-00	31-Oct-01	Regular Checkouts	Music Score	0	0	0	0	0	0	0	0			
8	Central Library	1-Nov-00	31-Oct-01	Regular Checkouts	Reserves	0	0	1	0	0	0	0	0			
9	Central Library	1-Nov-00	31-Oct-01	Regular Checkouts	Software	0	0	0	0	0	0	0	0			
10	Reference (Central Library)	1-Nov-00	31-Oct-01	Regular Checkouts	Books	0	0	0	0	0	0	0	0			
11	Reference (Central Library)	1-Nov-00	31-Oct-01	Regular Checkouts	CD ROM	0	0	0	0	0	0	0	0			
12	Reference (Central Library)	1-Nov-00	31-Oct-01	Regular Checkouts	Compact Disc	0	0	0	0	0	0	0	0			
13	Reference (Central Library)	1-Nov-00	31-Oct-01	Regular Checkouts	Journals	0	0	0	0	0	0	0	0			
14	Reference (Central Library)	1-Nov-00	31-Oct-01	Regular Checkouts	Manuscript	0	0	0	0	0	0	0	0			
15	Reference (Central Library)	1-Nov-00	31-Oct-01	Regular Checkouts	Music Score	0	0	0	0	0	0	0	0			
16	Reference (Central Library)	1-Nov-00	31-Oct-01	Regular Checkouts	Reserves	0	0	0	0	0	0	0	0			
17	Reference (Central Library)	1-Nov-00	31-Oct-01	Regular Checkouts	Software	0	0	0	0	0	0	0	0			
18	Miller Library	1-Nov-00	31-Oct-01	Regular Checkouts	Books	0	0	0	0	0	0	0	0			
19	Miller Library	1-Nov-00	31-Oct-01	Regular Checkouts	CD ROM	0	0	0	0	0	0	0	0			
20	Miller Library	1-Nov-00	31-Oct-01	Regular Checkouts	Compact Disc	0	0	0	0	0	0	0	0			
21	Miller Library	1-Nov-00	31-Oct-01	Regular Checkouts	Journals	0	0	0	0	0	0	0	0			
22	Miller Library	1-Nov-00	31-Oct-01	Regular Checkouts	Manuscript	0	0	0	0	0	0	0	0			
23	Miller Library	1-Nov-00	31-Oct-01	Regular Checkouts	Music Score	0	0	0	0	0	0	0	0			
24	Miller Library	1-Nov-00	31-Oct-01	Regular Checkouts	Reserves	0	0	0	0	0	0	0	0			
25	Miller Library	1-Nov-00	31-Oct-01	Regular Checkouts	Software	0	0	0	0	0	0	0	0			
26	Casula Library	1-Nov-00	31-Oct-01	Regular Checkouts	Books	0	0	0	0	0	0	0	0			
27	Casula Library	1-Nov-00	31-Oct-01	Regular Checkouts	CD ROM	0	0	0	0	0	0	0	0			
28	Casula Library	1-Nov-00	31-Oct-01	Regular Checkouts	Compact Disc	0	0	0	0	0	0	0	0			
29	Casula Library	1-Nov-00	31-Oct-01	Regular Checkouts	Journals	0	0	0	0	0	0	0	0			
30	Casula Library	1-Nov-00	31-Oct-01	Regular Checkouts	Manuscript	0	0	0	0	0	0	0	0			
31	Casula Library	1-Nov-00	31-Oct-01	Regular Checkouts	Music Score	0	0	0	0	0	0	0	0			
32	Casula Library	1-Nov-00	31-Oct-01	Regular Checkouts	Reserves	0	0	0	0	0	0	0	0			
33	Casula Library	1-Nov-00	31-Oct-01	Regular Checkouts	Software	0	0	0	0	0	0	0	0			
34	RÃ¶ntgen Memorial Laboratory	1-Nov-00	31-Oct-01	Regular Checkouts	Books	0	0	0	0	0	0	0	0			

Basic Circulation Statistics

Ready NUM

Figure 25 Basic Circulation Statistic (Tab-delimited Text File Viewed in Excel)

Virtua ILS Statistics and Reporting

(April 2001)

Bills

Category	Circulation	
Report Title	Bills	
Output Format	HTML	
	E-mail, Primary (38)	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Location	
	Patron Type	
	Notice Number to Generate	
	Delimiter	
	Primary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Secondary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Tertiary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)

	Update Database	
	Honor Language Preference	
	Honor Address Preference	
	Available Items Found	
	Date Format	DD-MM-YYYY
Field Labels	Patron Start Flag	
	Available Items Found	
	Report Date (1)	
	Item ID (8)	
	Barcode (9)	
	Item Class Code (10)	
	Item Class (11)	
	Shelf Location Code (12)	
	Shelf Location (13)	
	Main Location (14)	
	Item Units (15)	
	Copy Number (16)	
	Item Price (17)	
	Call Number (18)	
	Call Number Sortkey (19)	
	Patron ID (20)	
	Patron Barcode (21)	
	Address Preference Flag (22)	
	Patron Type Code (23)	
	Patron Type (24)	
	Patron Full Name (25)	
	Patron Personal Name (26)	
	Patron First Name	
	Patron Last Name	
	Patron Name Prefix (27)	
	Patron Name Suffix (28)	
	Attention Of (29)	
	Patron Street Address 1 (30)	
	Patron Street Address 2 (31)	
	Patron Street Address 3 (32)	
	Patron Postal Code (33)	
	Patron City (34)	
	Patron County (35)	
	Patron State (36)	
	Patron Country (37)	
	E-mail, Primary (38)	
	E-mail, Secondary (39)	
	Language Preference (40)	
	Home Library (41)	
	Institution (42)	
	College or School (43)	
	Department (44)	
	Class or Homeroom (64)	
	Patron Primary Telephone (45)	
	Patron Secondary Telephone (46)	
	Patron Primary Specialized Telephone (47)	
	Patron Secondary Specialized Telephone	

	(48)	
	FAX, Primary (49)	
	FAX, Secondary (50)	
	Full Patron Record (MARC) (51)	
	Processing Fee (52)	
	Holdings ID (53)	
	Holdings Units (54)	
	Hold Request Type (55)	
	Pickup Location Code (56)	
	Pickup Location Name (57)	
	Hold Expiration Date (58)	
	Bibliographic Record ID (60)	
	Part Title (61)	
	Author (62)	
	Title (63)	

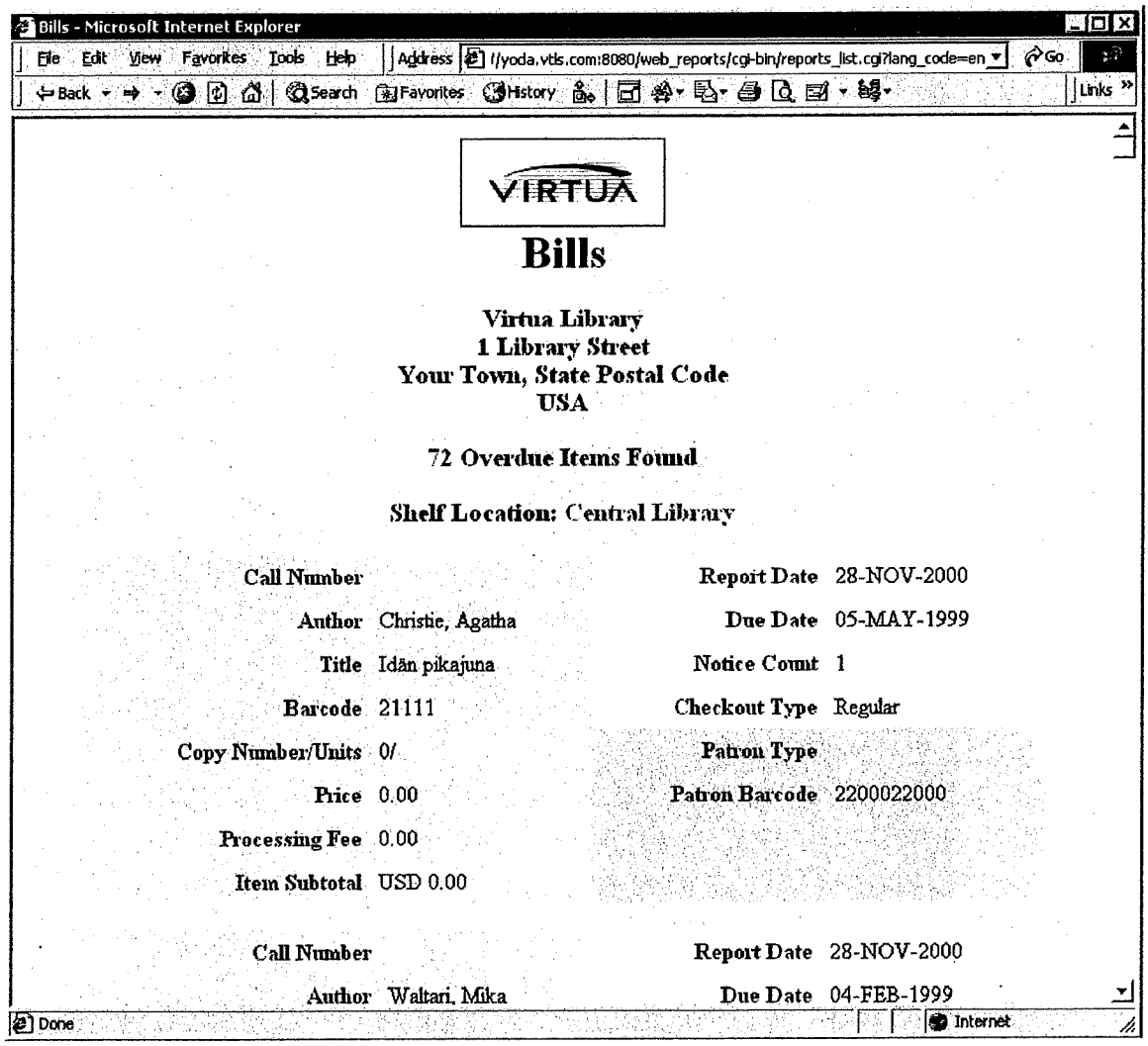


Figure 26 Bills (HTML)

Microsoft Excel - Bills.txt [Read-Only]

Patron Start Flag	Overdues Found	Report Date	Due Date	Notice Count	Checkout Type	Barcode	Item Class	Shelf Location Code	Shelf Location	Units
1	72	28-Nov-00	5-May-99	1	Regular	21111	Books	10000	Central Library	
	72	28-Nov-00	4-Feb-99	1	Regular	21000	Books	10000	Central Library	
	72	28-Nov-00	4-May-99	1	Regular	21002	Books	10000	Central Library	
	72	28-Nov-00	5-May-99	1	Regular	21009	Books	10000	Central Library	
1	72	28-Nov-00	2-Jul-94	1	Regular	7607	Books	20000	Miller Library	
	72	28-Nov-00	24-Jul-97	1	Regular	4087	Books	10000	Central Library	
1	72	28-Nov-00	8-Oct-94	1	Regular	6805	Books	10000	Central Library	
1	72	28-Nov-00	29-Jun-97	1	Regular	1000000001	Journals	10000	Central Library	V.1B
1	72	28-Nov-00	14-May-91	1	Regular	130	Books	10000	Central Library	
1	72	28-Nov-00	21-Mar-90	1	Regular	5549	Books	20000	Miller Library	
	72	28-Nov-00	16-Oct-91	1	Regular	35	Books	20000	Miller Library	
1	72	28-Nov-00	13-Apr-90	1	Regular	5548	Books	10000	Central Library	
1	72	28-Nov-00	29-Jul-91	1	Regular	4394	Books	10000	Central Library	
1	72	28-Nov-00	1-Sep-92	1	Regular	126	Books	20000	Miller Library	
1	72	28-Nov-00	27-May-92	1	Regular	17594	Books	10000	Central Library	
1	72	28-Nov-00	30-Aug-92	1	Regular	28	Books	20000	Miller Library	
1	72	28-Nov-00	23-Mar-90	1	Regular	311	Books	20000	Miller Library	
	72	28-Nov-00	23-Mar-90	1	Regular	312	Books	30000	Casula Library	
	72	28-Nov-00	23-Mar-90	1	Regular	313	Books	10000	Central Library	
1	72	28-Nov-00	9-Jan-96	1	Regular	8	Books	10000	Central Library	V.12 NO. 3 12
	72	28-Nov-00	11-Jul-97	1	Regular	6	Books	10000	Central Library	
	72	28-Nov-00	9-Jan-96	1	Regular	7	Books	10000	Central Library	
1	72	28-Nov-00	5-Oct-91	1	Regular	503	Books	20000	Miller Library	
	72	28-Nov-00	5-Oct-91	1	Regular	504	Books	30000	Casula Library	
	72	28-Nov-00	5-Oct-91	1	Regular	502	Books	10000	Central Library	
	72	28-Nov-00	5-Oct-91	1	Regular	508	Books	10000	Central Library	
	72	28-Nov-00	5-Oct-91	1	Regular	509	Books	20000	Miller Library	
	72	28-Nov-00	5-Oct-91	1	Regular	505	Books	10000	Central Library	
	72	28-Nov-00	5-Oct-91	1	Regular	506	Books	10000	Central Library	
	72	28-Nov-00	5-Oct-91	1	Regular	507	Books	20000	Miller Library	
1	72	28-Nov-00	30-Jan-90	1	Regular	1929	Books	20000	Miller Library	
1	72	28-Nov-00	26-Mar-92	1	Regular	4444	Books	10000	Central Library	
	72	28-Nov-00	13-Feb-92	1	Regular	333115	Books	10000	Central Library	

Figure 27 Bills (Tab-delimited Text File Viewed in Excel)

Virtua ILS Statistics and Reporting

(April 2001)

Circulation by Call Number Range (In Development)

Category	Circulation	
Report Title	Circulation by Call Number Range	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Call Number Ranges (up to 10 per individual report)	Start
		End
	E-mail Column Width	
	Transaction Type	Regular Checkout
		In-House Checkouts
		Fixed Date Checkouts
		Selected Date Checkouts
		Materials Booking Checkouts
	Location	
	Item Class	
	Patron Type	
	Select Column for Crosstab	Item Class
		Patron Type
	Select Percent Column	Selected Column
		Call Number Range
	Start Date	
	End Date	
	Templates	
Field Labels	Start Date	
	End Date	
	Location	
	Patron Type	
	Range	
	Transaction Type	

No sample report available.

Virtua ILS Statistics and Reporting

(April 2001)

Circulation Snapshot

Category	Circulation	
Report Title	Circulation Snapshot	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	E-mail Column Width	
	Table	
	Total	
Transaction Type Labels	Hold	
	Recall	
	Loan	
	Page	
	Batch Recall	
	Document Delivery	
	ILL	
	Reserve Request	
Field Labels	Circulating Items Table	
	Circulating Patrons	
	Current Item-Level Requests Table	
	Current Bib-Level Requests Table	
	Item Status Table	
	Bib Status Table	

Circulation Snapshot - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address //yoda.vtls.com:8080/web_reports/cgi-bin/reports_list.cgi?lang_code=en Go

Back Search Favorites History Links

VIRTUA

Circulation Snapshot

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Circulating Patrons

140

Circulating Items Table

Journals	60
Books	1,314
Reserves	3
Total	1,377

Current Item-Level Requests

Page

	Academic	Faculty	Hospital Staff	Student	Other Borrower	High School Student	Total

Done Internet

Figure 28 Circulation Snapshot (HTML)

Virtua Report Results: Circulation Snapshot - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:37 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Circulation Snapshot

Report: Circulation Snapshot
Configuration Name: mktg test
Configuration Author: VTLS mktg

Circulating Patrons: 140

Circulating Items Table

Journals	60
Books	1,314
Reserves	3
Total	1,377

Current Item-Level Requests

Page

	Academic	Faculty Hospital Staf	Student Other Borrowe High School S	Total
Books	1	5	6	
Journals				
Total	1	5	6	

Hold

Figure 29 Circulation Snapshot (E-mail Body)

Circulation Snapshot5.utx [Read-Only]

	A	B	C
1	Reserve Order	1	
2	Missing	7	
3		47	
4	At Bindery	4	
5	Part Order Received	1	
6	Claimed Return	2	
7	Selected for ordering	3	
8	Reserve Search	5	
9	Deposit Item	1	
10	Requested for Loan	9	
11	In Transit	184	
12	On Hold	49	
13	Claim Entered	2	
14	Reserve Recall	1	
15	Needs Repair	6	
16	Repair Shelf	5	
17	Bindery Ready	1	
18	Reserve Binder	2	
19	Reserve Missing	1	
20	In Cataloging	5	
21	Repair	2	
22	Order Rejected	1	
23	Reserve Order	1	
24		29	
25	At Bindery	4	
26	In Transit	173	
27	Claim Entered	2	
28	Repair Shelf	5	
29	Bindery Ready	1	
30	Missing	7	
31	Claimed Return	2	
32	Part Order Received	1	

Circulation Snapshot4.utx [Read-Only]

	A	B	C
1	Current Bib-Level Requests	Academic	Faculty Hc
2	Page		13
3	Hold	2	36
4	Recall		10
5	Loan		28

Circulation Snapshot2.utx [Read-Only]

	A	B	C	D	E
1	Journals	60			
2	Books	1,314			
3	Reserves	3			
4	Total	1,377			

Circulation Snapshot3.utx [Read-Only]

	A	B	C	D	E
1	Page	Academic	Faculty	Hospital Staff	Studen
2	Books	1	5		
3	Journals				
4	Total	1	5		
5	Hold	Academic	Faculty	Hospital Staff	Studen
6	Books		25		
7	Journals				
8	Total		25		
9	Recall	Academic	Faculty	Hospital Staff	Studen
10	Books		6		
11	Journals				
12	Total		6		
13	Loan	Academic	Faculty	Hospital Staff	Studen
14	Books		5		

Circulation Snapshot1.utx [Read-Only]

	A	B	C
1	Patrons Circulating Items	140	

Figure 30 Circulation Snapshot (Tab-delimited Text File Viewed in Excel)

Virtua ILS Statistics and Reporting

(April 2001)

E-mail Validation (In Development)

Category	Circulation	
Report Title	E-mail Validation	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Patron Type	
	Address Preference	E-mail
		Postal Address
	Primary Sort	College or School
		Department
		Institution
		Home Library
		Patron Type
	Secondary Sort	College or School
		Department
		Institution
		Home Library
		Patron Type
Field Labels	Patron Type	
	Barcode	
	Address Preference	
	Name	
	First Name	
	Last Name	
	Prefix	
	Suffix	
	Telephone, Primary	
	Telephone, Primary Special	
	Fax, Primary	
	Telephone, Secondary	
	Telephone, Secondary Special	
	Fax, Secondary	
	E-mail, Primary	
	E-mail, Secondary	
	Home Library	
	Institution	
	College or School	
	Department	

No sample output available

Virtua ILS Statistics and Reporting

(April 2001)

Expired Requests (In Development)

Category	Circulation	
Report Title	Expired Request	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Location	
	Patron Type	
	Delimiter	
	Primary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Secondary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Tertiary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Update Database	
	Honor Language Preference	

	Honor Address Preference	
	Items Found Message	
	Date Format	
	Editable Templates	E-mail Page
		E-mail Row
		HTML Header
		HTML Page
		HTML Row
Expired Category Labels	Unsatisfied Request	
	Satisfied Request	
	Route to Shelf Location	
	Hold For New Request	
	Route to New Pickup Location	
Field Labels	Patron Start Flag	
	Expired Request(s) Found	
	Report Date (1)	
	Item ID (8)	
	Barcode (9)	
	Item Class Code (10)	
	Item Class (11)	
	Shelf Location Code (12)	
	Shelf Location (13)	
	Main Location (14)	
	Item Units (15)	
	Copy Number (16)	
	Item Price (17)	
	Call Number (18)	
	Call Number Sortkey (19)	
	Patron ID (20)	
	Patron Barcode (21)	
	Address Preference Flag (22)	
	Patron Type Code (23)	
	Patron Type (24)	
	Patron Full Name (25)	
	Patron Personal Name (26)	
	Patron First Name	
	Patron Last Name	
	Patron Name Prefix (27)	
	Patron Name Suffix (28)	
	Attention Of (29)	
	Patron Street Address 1 (30)	
	Patron Street Address 2 (31)	
	Patron Street Address 3 (32)	
	Patron Postal Code (33)	
	Patron City (34)	
	Patron County (35)	
	Patron State (36)	
	Patron Country (37)	
	E-mail, Primary (38)	
	E-mail, Secondary (39)	
	Language Preference (40)	

	Home Library (41)	
	Institution (42)	
	College or School (43)	
	Department (44)	
	Class or Homeroom (64)	
	Patron Primary Telephone (45)	
	Patron Secondary Telephone (46)	
	Patron Primary Specialized Telephone (47)	
	Patron Secondary Specialized Telephone (48)	
	FAX, Primary (49)	
	FAX, Secondary (50)	
	Full Patron Record (MARC) (51)	
	Processing Fee (52)	
	Holdings ID (53)	
	Holdings Units (54)	
	Hold Request Type (55)	
	Pickup Location Code (56)	
	Pickup Location Name (57)	
	Hold Expiration Date (58)	
	Bibliographic Record ID (60)	
	Part Title (61)	
	Author (62)	
	Title (63)	
	Expired Category (65)	

Templates may be edited to change appearance of or information returned by a specific report configuration. See *Customizing Virtua Statistics and Reporting* in the *Virtua Statistics and Reporting User Guide* for help in editing the template. See *Appendix A - Variable Names* for a list of the variables available for use in this report

E-Mail Page Template:

```
%($library_name)%
%($library_address1)%
%($library_address2)%
%($library_address3)%

%($first_name)% %($last_name)%
%($email_primary)%
%($report_date)%

Dear %(
if ( $prefix ) {
        my $return = "$prefix $last_name"
} else {
        my $return = "$first_name $last_name";
}
)%,

The following items, which you requested to have held for you, have
expired, and are no longer being held for you.

%(&::email_rows)%These items will be returned to the shelves and made
```

available to other patrons.

E-Mail Row Template:

```
%($call_number_label)%: %($call_number)% %($item_units)% c. %($copy_number)%
%($author_label)%: %($author)%
%($title_label)%: %($title)%
%($item_barcode_label)%: %($item_barcode)%
%($item_location_name_label)%: %($item_location_name)%
%($hold_expiration_date_label)%: %($hold_expiration_date)%
%($request_type_label)%: %($request_type)%
%($pickup_location_name_label)%: %($pickup_location_name)%
```

HTML Page Template:

```
<!DOCTYPE html PUBLIC "-//IETF//DTD HTML 4.01 Transitional//EN">
<HTML lang="%($::LANG_CODE)%" dir="%($dir)%">

<HEAD>
<META http-equiv="Content-Type" content="text/html; charset=UTF-8">
<TITLE>
%($report_name)%
</TITLE>
<LINK rev="MADE" href="mailto:hotline@vtls.com">
</HEAD>

<BODY bgcolor="#FFFFFF" background="%($image_dir)%/%($bg_image)%">

<H1 dir="%($dir)%" align="center">
<IMG border="1" src="%($image_dir)%/%($logo)%" alt="%($logo_desc)%"><BR>
%($report_name)%
</H1>

<H3 dir="%($dir)%" align="center">
%($user_library_name)%<BR>
%($user_library_address1)%<BR>
%($user_library_address2)%<BR>
%($user_library_address3)%<BR>
</H3>

<P align="center">
<B>%($record_count)% %($user_items_found_label)%</B>
</P>

%(&::html_table_rows)%

%(&VTLS::VRept::html_footer)%
</BODY>
</HTML>
```

HTML Row Template:

```
<TABLE border="0" align="center" cellpadding="6" cellspacing="0" width="90%"
summary="%($table_summary)%" dir="%($dir)%">

<TR>
<TH align="right" valign="top" bgcolor="#DDDDDD">
%($call_number_label)%
</TH>
```

```
<TD valign="top" bgcolor="#DDDDDD">
%($call_number)%
</TD>

<TH align="right" valign="top" bgcolor="#DDFFDD">
%($hold_expiration_date_label)%
</TH>

<TD valign="top" bgcolor="#DDFFDD">
%($hold_expiration_date)%
</TD>
</TR>

<TR>
<TH align="right" valign="top" bgcolor="#DDDDDD">
%($author_label)%
</TH>

<TD valign="top" bgcolor="#DDDDDD">
%($author)%
</TD>

<TH align="right" valign="top" bgcolor="#DDFFDD">
%($request_type_label)%
</TH>

<TD valign="top" bgcolor="#DDFFDD">
%($request_type)%
</TD>
</TR>

<TR>
<TH align="right" valign="top" bgcolor="#DDDDDD">
%($title_label)%
</TH>

<TD valign="top" bgcolor="#DDDDDD">
%($title)%
</TD>

<TH align="right" valign="top" bgcolor="#DDFFDD">
%($pickup_location_name_label)%
</TH>

<TD valign="top" bgcolor="#DDFFDD">
%($pickup_location_name)%
</TD>
</TR>

<TR>
<TH align="right" valign="top" bgcolor="#DDDDDD">
%($item_barcode_label)%
</TH>

<TD valign="top" bgcolor="#DDDDDD">
```

```
%($item_barcode)%
</TD>

<TH align="right" valign="top" bgcolor="#DDFFDD">
%($expired_category_label)%
</TH>

<TD valign="top" bgcolor="#DDFFDD">
%($expired_category)%
</TD>
</TR>

<TR>
<TH align="right" valign="top" bgcolor="#DDDDDD">
%($item_units_label)%/%($copy_number_label)%
</TH>

<TD valign="top" bgcolor="#DDDDDD">
%( if ( $item_units ) { "$item_units" } )%
%( if ( $copy_number != 0 ) { "c. $copy_number" } )%
</TD>

<TH align="right" valign="top" bgcolor="#DDDDFF">
%($patron_type_name_label)%
</TH>

<TD valign="top" bgcolor="#DDDDFF">
%($patron_type_name)%
</TD>
</TR>

<TR>
<TH align="right" valign="top" bgcolor="#DDDDDD">
%($item_location_name_label)%
</TH>

<TD valign="top" bgcolor="#DDDDDD">
%($item_location_name)%
</TD>

<TH align="right" valign="top" bgcolor="#DDDDFF">
%($patron_barcode_label)%
</TH>

<TD valign="top" bgcolor="#DDDDFF">
%($patron_barcode)%
</TD>
</TR>

</TABLE>
<BR>
```

Virtua ILS Statistics and Reporting

(April 2001)

Items by Status

Category	Circulation	
Report Title	Items by Status	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Status	Received
		Selected For Ordering
		Claim Entered
		Order Received
		Part Order Received
		Order Rejected
		To Be Ordered
		Reserve Search
		Reserve Recall
		Reserve Order
		Reserve Missing
		Needs Repair
		Reserve Binder
		Deposit Item
		In Cataloging
		Confiscated
		Repair
		Missing
		On Hold
		Bindery Ready
		At Bindery
		Repair Shelf
		In Transit
		Requested For Loan
		At Photocopy
		Claimed Return
		Given to Cataloger A
	Primary Sort	Author
		Call Number
		Location
		Title
	Secondary Sort	Author
		Call Number
		Location
		Title
Field Labels	Status	

	Status ID	
	Call Number	
	Title	
	Author	
	Location	
	Date Set	
	Report Number	

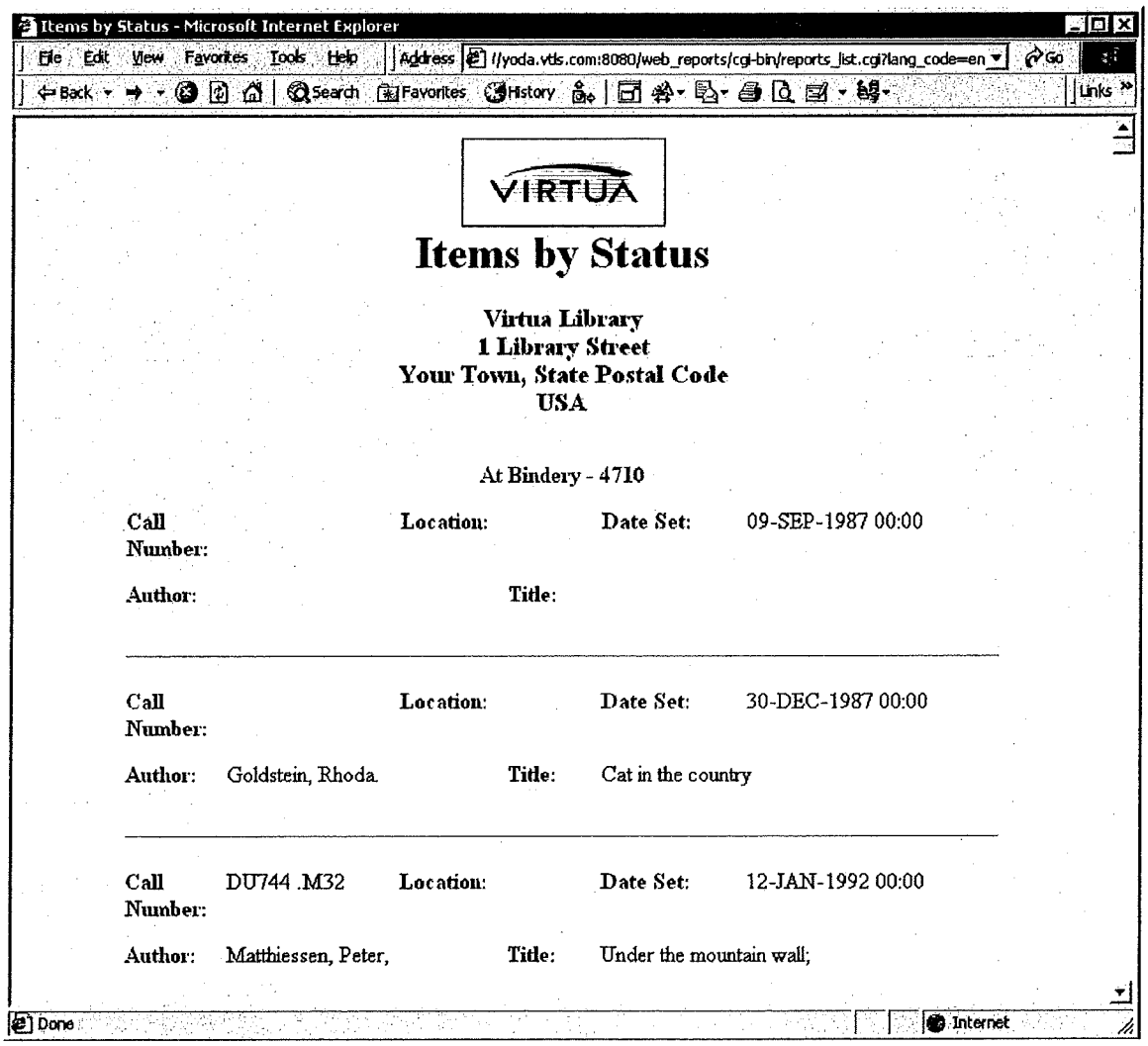


Figure 31 Items by Status (HTML)

Virtua Report Results: Items by Status - Message (Plain Text) - Unicode (UTF-8)

File Edit View Insert Format Tools Actions Help

Reply | Reply to All | Forward

From: Web Reports Server [webrpt@yoda.vtls.com] Sent: Tue 11/28/2000 3:48 PM
To: martinr@vtls.com
Cc:
Subject: Virtua Report Results: Items by Status

Report: Items by Status
Configuration Name: mktg test
Configuration Author: VTLS mktg

Status: At Bindery - Status ID: 4710

Call Number:
Location:
Title:
Author:
Date Set: 09-SEP-1987 00:00
Report No.: 12336

Call Number:
Location:
Title: Cat in the country
Author: Goldstein, Rhoda.
Date Set: 30-DEC-1987 00:00
Report No.: 0

Call Number: DU744 .M32
Location:
Title: Under the mountain wall:

Figure 32 Items by Status (E-mail Body)

Virtua ILS Statistics and Reporting

(April 2001)

Items by Subject

Category	Circulation	
Report Title	Items by Subject	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Subject	
	Primary Sort	Author
		Call Number
		Location
		Publication
		Title
	Secondary Sort	Author
		Call Number
		Location
		Publication
		Title
Field Labels	Subject	
	Call Number	
	Title	
	Author	
	Location	
	Bib ID	
	Description	
	Publication	

Virtua ILS Statistics and Reporting

(April 2001)

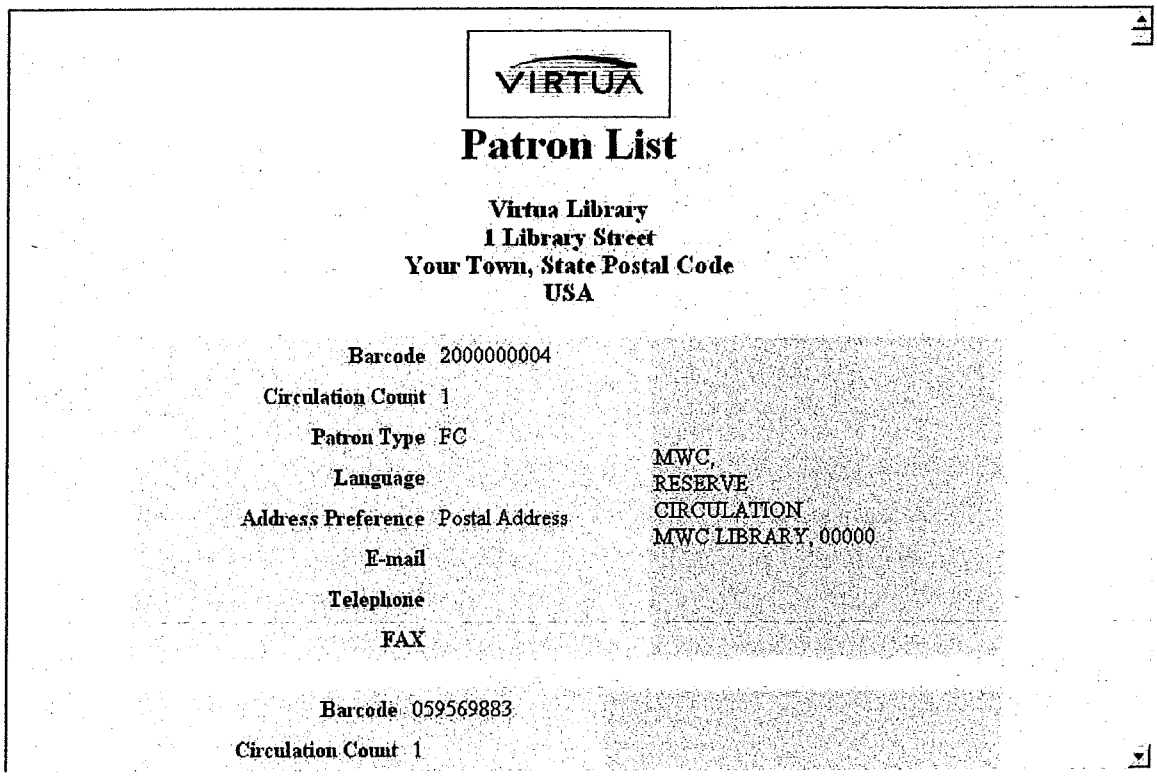
Patron List (In Development)

Category	Circulation	
Report Title	Patron List	
Output Format	HTML	
	E-mail	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Patron Type	
	Address Preference	E-mail
		Postal Address
	City	
	County	
	State	
	Country	
	Postal Code	
	Home Library	
	Institution	
	College or School	
	Department	
	Class or Homeroom	
	Primary Sort	City
		County
		State
		Country
		Postal Code
		Home Library
		Institution
		College or School
		Department
		Class or Homeroom
	Secondary Sort	City
		County
		State
		Country
		Postal Code
		Home Library
		Institution
		College or School
		Department
		Class or Homeroom
	Address	
	Show Only Patrons Who Have Circulated Items	
	Show Only Patrons With Items Currently Checked	

Virtua ILS Statistics and Reporting

(April 2001)

Field Labels	Patron Type	
	Barcode	
	Address Preference	
	Name	
	First Name	
	Last Name	
	Prefix	
	Suffix	
	Street Address 1	
	Street Address 2	
	Attention of	
	City	
	County	
	State	
	Country	
	Postal Code	
	Telephone, Primary	
	Telephone, Primary Special	
	FAX, Primary	
	Telephone, Secondary	
	Telephone, Secondary Special	
	FAX, Secondary	
	E-mail, Primary	
	E-mail Secondary	
	Home Library	
	Institution Affiliation	
	Institution	
	College or School	
	Department	
	Class or Homeroom	
	Language	
	Circulation Count	



VIRTUA

Patron List

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Barcode	2000000004	
Circulation Count	1	
Patron Type	FC	
Language		MWC, RESERVE CIRCULATION MWC LIBRARY, 00000
Address Preference	Postal Address	
E-mail		
Telephone		
FAX		

Barcode	059569883
Circulation Count	1

Figure 34 Patron List (HTML)

From: Web Reports Server [houser]@vtls.com] Sent: Wed 1/31/2001 1:48 PM
To: martinr@vtls.com
Cc:
Subject: Patron List

Name: Joseph G. Dreiss
Institution:
College Or School/Department:
Address: ART DEPARTMENT, MELCHERS 104, 0 0000000000
Barcode: 150428787
Patron Type: FC
Language:
Address Preference: Postal Address
E-mail:
Telephone: 000000000000
FAX:
Circulation Count: 1380

Name: Janet E. Hughes
Institution:
College Or School/Department:
Address: , 0 0000000000
Barcode: 227708267
Patron Type: FC
Language:
Address Preference: Postal Address
E-mail:
Telephone: 000000000000
FAX:
Circulation Count: 9

Name: TERRI LAM

Figure 35 Patron List (E-mail Body)

Microsoft Excel - Patron List.txt [Read-Only]

A1 Patron Type

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	Patron Typ	Barcode	Address P	Name	First Name	Last Name	Prefix	Suffix	Street Add	Street Add	Attention (	City	County	State	Country	Po
2	FC	2E+09	Postal Ad	MWC,		MWC,			RESERVE	CIRCULATION		MWC LIBRARY				
3	FC	2E+09	Postal Ad	COLLEGE	MARY C	COLLEGE			CIRCULAT	MWC						
4	FC	1.16E+08	Postal Ad	Hunt, Davi	David E.	Hunt								0		
5	FC	1.5E+08	Postal Ad	Dreiss, Jo	Joseph G.	Dreiss			ART DEP	MELCHERS 104				0		
6	FC	2.23E+08	Postal Ad	LAM, TER	TERRI	LAM			BOX MWC-2365							
7	FC	2.28E+08	Postal Ad	Hughes, J	Janet E.	Hughes								0		
8	FC	2.36E+08	Postal Ad	Balgavy, R	Rosemary	Balgavy								0		
9	FC	3.27E+08	Postal Ad	Bales, Jan	James E.	Bales			SIMPSON MWC					0		
10	FC	4.26E+08	Postal Ad	Law, Timo	Timothy	Law								0		
11	FC	2.37E+08	Postal Ad	Stansbury	Harry	Stansbury			History & American Studies					0		
12	FC	2.26E+08	Postal Ad	PEACEM	JAMES	PEACEMAKER			BOX MWC-1338							
13	FC	374	Postal Ad	Cambisios	Mark	Cambisios			446 The Homeplace			Levittown		NY		
14	FC	204	Postal Ad	CAPRASS	Paul	CAPRASSE			Av. du Taillis, 16			Genappe				
15	FC	1.69E+08	Postal Ad	Lionus, Bri	Brianna	Lionus			7 CLAY STREET			TUNKHANNOCK		PA		1.6
16	FC	6.24E+08	Postal Ad	Chafee, El	Ellen M.	Chafee			131 3rd. Avenue, N.E.			Washington		DC		
17	FC	2.2E+08	Postal Ad	SUBRAM	JITENDRA	SUBRAMANYAM			1700 19 TH	APT 4E		WASHINGTON		DC		
18	FC	4.19E+08	Postal Ad	Davis, Larr	Larry D.	Davis			1005 Sigsbee Place, NE #516			Washington		DC		
19	FC	2.32E+08	Postal Ad	Scolaro, M	Margaret	Scolaro			8970 Milroy Court			Manassas		VA		2.0
20	FC	53905648	Postal Ad	Aversano,	Lawrence I	Aversano			2004 Jonathan Drive			Sterling		VA		2.0
21	FC	3.18E+08	Postal Ad	Housley, H	Helen M.	Housley			12615 Bayard Drive			Reston		VA		2.0
22	FC	2.3E+08	Postal Ad	Morton, W	W.W. Brown	Morton			P.O. Box 158			Waterford		VA		2.0
23	FC	2.17E+08	Postal Ad	Roscoe, E	Eugene A	Roscoe			7242 Mahogany Drive			Landover		MD		2.0
24	FC	25508364	Postal Ad	Tanenbaur	Richard	Tanenbaum			8315 Northbrook Lane #506			Bethesda		MD		2.0
25	FC	2.98E+08	Postal Ad	Osterman,	Lisa	Osterman			4513 Chase Avenue			Bethesda		MD		2.0
26	FC	2.18E+08	Postal Ad	Miller, Sus	Susan L S	Miller			5117 Wissioming Road			Bethesda		MD		2.0
27	FC	2.29E+08	Postal Ad	HERTZOG	MARK W.	HERTZOG			13625 COI	APT 828		SILVER SPRING		MD		
28	FC	2.28E+08	Postal Ad	Wood, Ro	Rodrick	Wood			5711 Burke Towne Court			Burke		VA		2
29	FC	1.13E+08	Postal Ad	Karassik, I	Kathryn K.	Karassik			12711 Megills Landing Lane			Clifton		VA		2
30	FC	2.23E+08	Postal Ad	Emery, An	Amy	Emery			3942 Wilcoxson Drive			Fairfax		VA		2
31	FC	3.11E+08	Postal Ad	Crippen, Ti	Timothy A.	Crippen			7932 Hollington Place			Fairfax Station		VA		2
32	FC	4.96E+08	Postal Ad	Diamant, C	Constance	Diamant			6328 Karmich Street			Fairfax Station		VA		2

Patron List

Ready NUM

Figure 36 Patron List (Tab-delimited Text File Viewed in Excel)

Patron Statistics (In Development)

Category	Circulation	
Report Title	Patron Statistics	
Output Format	HTML	
	E-mail, Primary (38)	
	E-mail with tab-delimited attachment	
General Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
Report Specific Parameters	Patron Type	
	Patron Count	
	Number Circulating	
	Percent Circulation	
	Total Circulation	

Patron Statistics

Virtua Library
1 Library Street
Your Town, State Postal Code
USA

Patron Type	Patron Count	Total Circulation	Number Circulating	Percent Circulating
Faculty	436	32,116	250	57.34
Other	3	75	3	100.00
Regular Patron	36	32,583	31	86.11
Staff	2	14	2	100.00
Special	3	13,471	3	100.00
Student	4,701	39,248	2,569	54.65
UG	1	7	1	100.00

Figure 37 Patron Statistics (HTML)

From: Web Reports Server [houser]@vtls.com] Sent: Wed 1/31/2001 2:36 PM
To: martinr@vtls.com
Cc:
Subject: Patron Statistics

Report: Patron Statistics
Configuration Name: E-mail Test
Configuration Author: Houser

Faculty

Patron Count: 436
Total Circulation: 32,116
Number Circulating: 250
Percent Circulating: 57.34

Other

Patron Count: 3
Total Circulation: 75
Number Circulating: 3
Percent Circulating: 100.00

Regular Patron

Patron Count: 36
Total Circulation: 32,583
Number Circulating: 31
Percent Circulating: 86.11

Staff

Figure 38 Patron Statistics (E-mail Body)

Patron Type	Patron Count	Total Circulation	Number Circulating	Percent Circulating
Faculty	436	32,116	250	57.34
Other	3	75	3	100
Regular Patron	36	32,583	31	86.11
Staff	2	14	2	100
Special	3	13,471	3	100
Student	4,701	39,246	2,569	54.65
UG	1	7	1	100
fc	1	1	1	100
st	2	26	2	100

Patron Statistics

Figure 39 Patron Statistics (Tab-delimited Text File Viewed in Excel)

Virtua ILS Statistics and Reporting

(April 2001)

Overdues

Category	Circulation	
Report Title	Overdues	
Output Format	HTML	
	E-mail, Primary (38)	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Location	
	Patron Type	
	Notice Number to Generate	
	Delimiter	
	Primary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Secondary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Tertiary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Update Database	

	Honor Language Preference	
	Honor Address Preference	
	Available Items Found	
	Date Format	DD-MM-YYYY
Field Labels	Patron Start Flag	
	Available Items Found	
	Report Date (1)	
	Item ID (8)	
	Barcode (9)	
	Item Class Code (10)	
	Item Class (11)	
	Shelf Location Code (12)	
	Shelf Location (13)	
	Main Location (14)	
	Item Units (15)	
	Copy Number (16)	
	Item Price (17)	
	Call Number (18)	
	Call Number Sortkey (19)	
	Patron ID (20)	
	Patron Barcode (21)	
	Address Preference Flag (22)	
	Patron Type Code (23)	
	Patron Type (24)	
	Patron Full Name (25)	
	Patron Personal Name (26)	
	Patron First Name	
	Patron Last Name	
	Patron Name Prefix (27)	
	Patron Name Suffix (28)	
	Attention Of (29)	
	Patron Street Address 1 (30)	
	Patron Street Address 2 (31)	
	Patron Street Address 3 (32)	
	Patron Postal Code (33)	
	Patron City (34)	
	Patron County (35)	
	Patron State (36)	
	Patron Country (37)	
	E-mail, Primary (38)	
	E-mail, Secondary (39)	
	Language Preference (40)	
	Home Library (41)	
	Institution (42)	
	College or School (43)	
	Department (44)	
	Class or Homeroom (64)	
	Patron Primary Telephone (45)	
	Patron Secondary Telephone (46)	
	Patron Primary Specialized Telephone (47)	
	Patron Secondary Specialized Telephone (48)	

	FAX, Primary (49)	
	FAX, Secondary (50)	
	Full Patron Record (MARC) (51)	
	Processing Fee (52)	
	Holdings ID (53)	
	Holdings Units (54)	
	Hold Request Type (55)	
	Pickup Location Code (56)	
	Pickup Location Name (57)	
	Hold Expiration Date (58)	
	Bibliographic Record ID (60)	
	Part Title (61)	
	Author (62)	
	Title (63)	

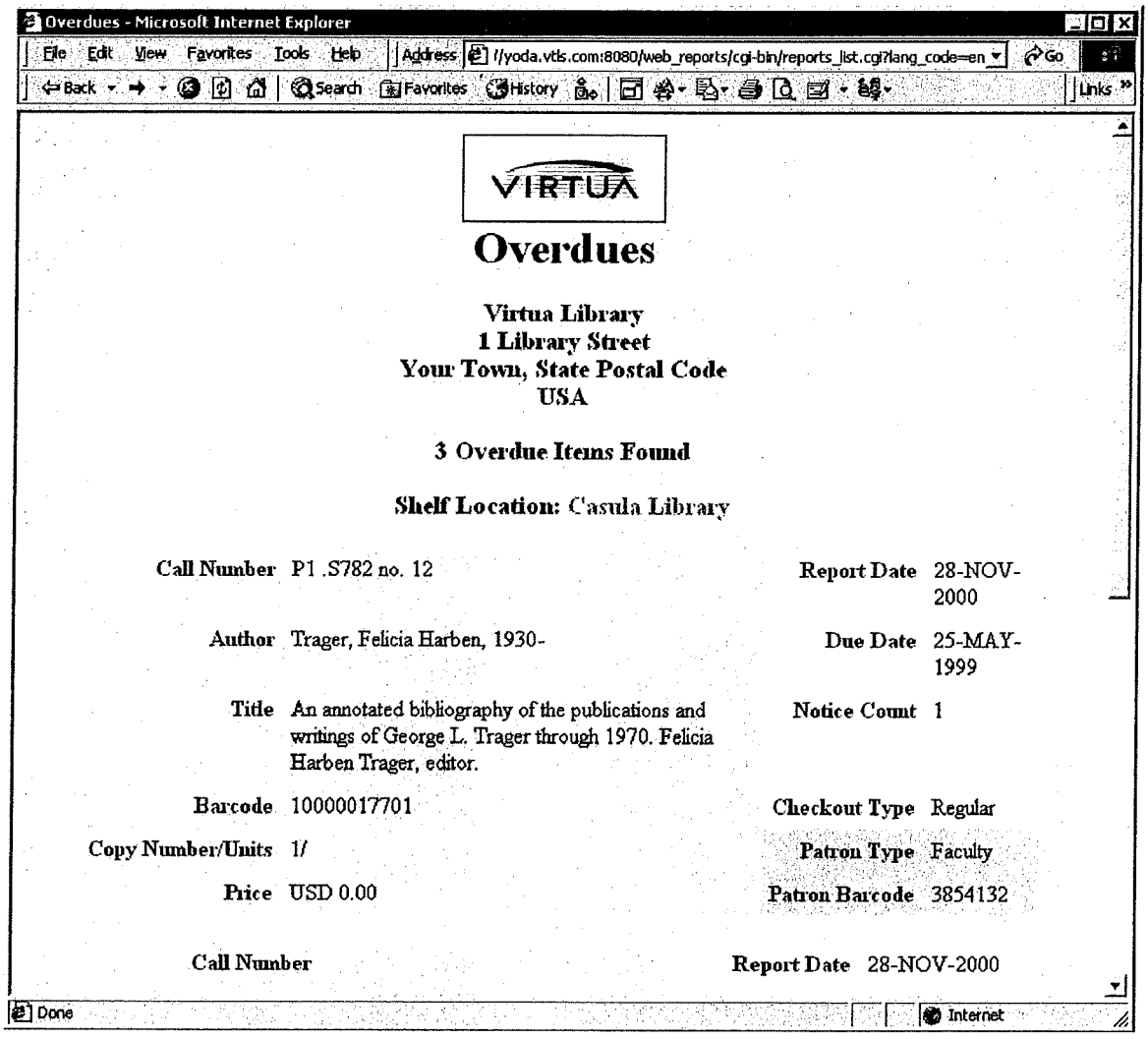


Figure 40 Overdues (HTML)

Microsoft Excel - Overdues.xlsx [Read-Only]

Patron Start Flag	Overdues Found	Report Date	Due Date	Notice Count	Checkout Type	Barcode	Item Class	Shelf Location Code	Shelf Location	Units	Copy N
1	3	28-Nov-00	25-May-99	1	Regular	10000017701	Books	30000	Casula Library		
1	3	28-Nov-00	4-Jul-99	1	Regular	43545	Journals	30000	Casula Library		
	3	28-Nov-00	4-Jul-99	1	Regular	786501	Journals	30000	Casula Library		

Figure 41 Overdues (Tab-delimited Text File Viewed in Excel)

Recalls

Category	Circulation	
Report Title	Recalls	
Output Format	HTML	
	E-mail, Primary (38)	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Location	
	Patron Type	
	Notice Number to Generate	
	Delimiter	
	Primary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Secondary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Tertiary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)

	Update Database	
	Honor Language Preference	
	Honor Address Preference	
	Regular Checkout Label	
	In-House Checkout Label	
	Reserve Checkout Label	
	Recalls Found	
	Date Format	
Field Labels	Patron Start Flag	
	Available Items Found	
	Report Date (1)	
	Item ID (8)	
	Barcode (9)	
	Item Class Code (10)	
	Item Class (11)	
	Shelf Location Code (12)	
	Shelf Location (13)	
	Main Location (14)	
	Item Units (15)	
	Copy Number (16)	
	Item Price (17)	
	Call Number (18)	
	Call Number Sortkey (19)	
	Patron ID (20)	
	Patron Barcode (21)	
	Address Preference Flag (22)	
	Patron Type Code (23)	
	Patron Type (24)	
	Patron Full Name (25)	
	Patron Personal Name (26)	
	Patron First Name	
	Patron Last Name	
	Patron Name Prefix (27)	
	Patron Name Suffix (28)	
	Attention Of (29)	
	Patron Street Address 1 (30)	
	Patron Street Address 2 (31)	
	Patron Street Address 3 (32)	
	Patron Postal Code (33)	
	Patron City (34)	
	Patron County (35)	
	Patron State (36)	
	Patron Country (37)	
	E-mail, Primary (38)	
	E-mail, Secondary (39)	
	Language Preference (40)	
	Home Library (41)	
	Institution (42)	
	College or School (43)	
	Department (44)	
	Class or Homeroom (64)	
	Patron Primary Telephone (45)	

	Patron Secondary Telephone (46)	
	Patron Primary Specialized Telephone (47)	
	Patron Secondary Specialized Telephone (48)	
	FAX, Primary (49)	
	FAX, Secondary (50)	
	Full Patron Record (MARC) (51)	
	Processing Fee (52)	
	Holdings ID (53)	
	Holdings Units (54)	
	Hold Request Type (55)	
	Pickup Location Code (56)	
	Pickup Location Name (57)	
	Hold Expiration Date (58)	
	Bibliographic Record ID (60)	
	Part Title (61)	
	Author (62)	
	Title (63)	

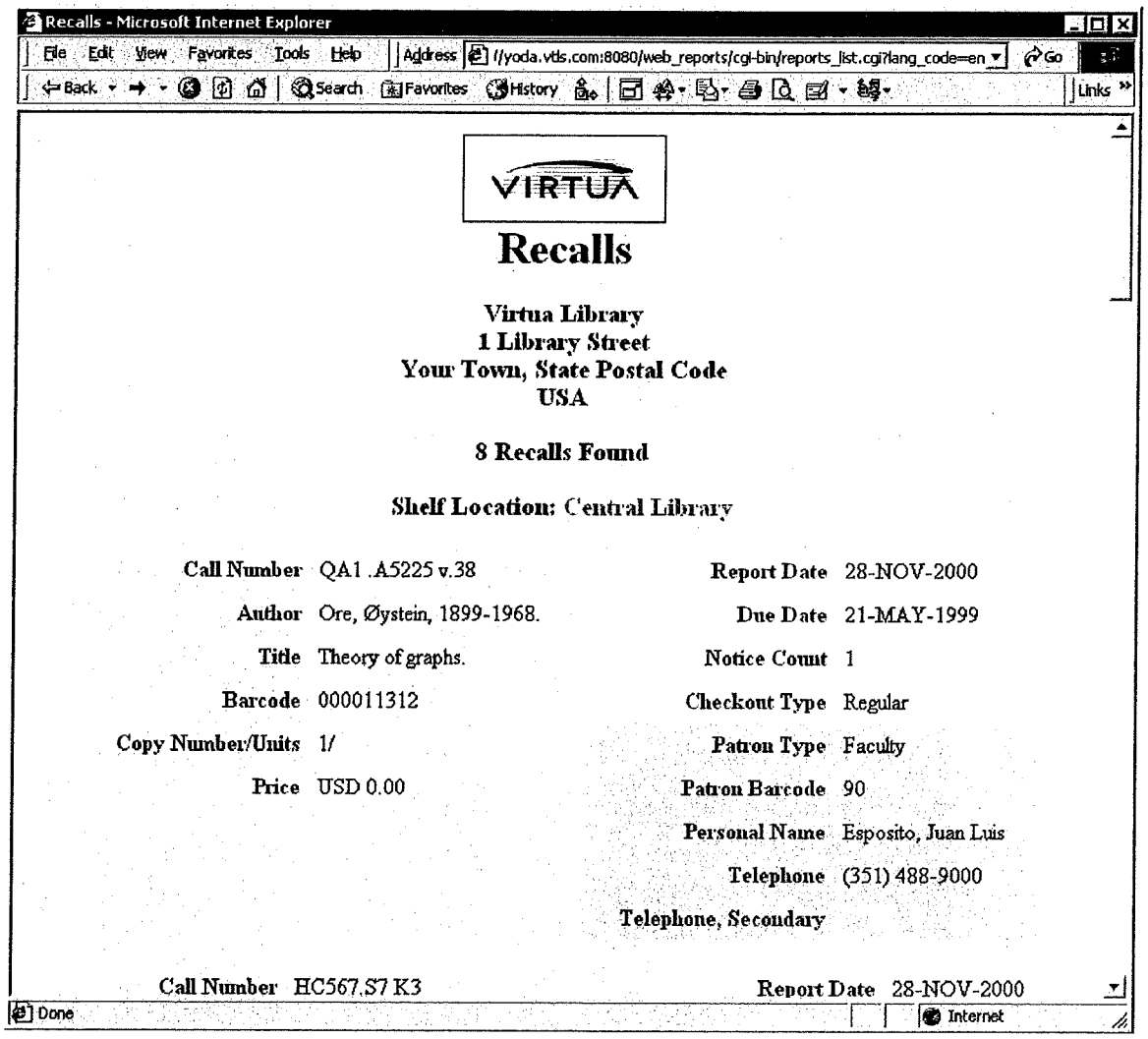


Figure 42 Recalls (HTML)

Microsoft Excel - Recalls.txt [Read-Only]

Patron Start Flag	Overdues Found	Report Date	Due Date	Notice Count	Checkout Type	Barcode	Item Class	Shelf Location Code	Shelf Location	Units	Copy Numb
1	8	28-Nov-00	21-May-99	1	Regular	11312	Books	10000	Central Library		
1	8	28-Nov-00	30-Nov-99	1	Regular	12967	Books	10000	Central Library		
1	8	28-Nov-00	5-Jun-00	1	Regular	4558	Books	10000	Central Library		
1	8	28-Nov-00	15-May-00	1	Regular	8545	Books	10000	Central Library		
1	8	28-Nov-00	23-Jun-99	1	Regular	3163	Books	10000	Central Library		
1	8	28-Nov-00	29-Nov-99	1	Regular	12099	Books	20000	Miller Library		
	8	28-Nov-00	29-Nov-99	1	Regular	98762	Books	20000	Miller Library		
1	8	28-Nov-00	7-Dec-99	1	Regular	16135	Books	20000	Miller Library		

Figure 43 Recalls (Tab-delimited Text File Viewed in Excel)

Requested Bills

Category	Circulation	
Report Title	Requested Bills	
Output Format	HTML	
	E-mail, Primary (38)	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Location	
	Patron Type	
	Notice Number to Generate	
	Delimiter	
	Primary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Secondary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Tertiary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)

	Update Database	
	Honor Language Preference	
	Honor Address Preference	
	Regular Checkout Label	
	In-House Checkout Label	
	Reserve Checkout Label	
	Recalls Found	
	Date Format	
Field Labels	Patron Start Flag	
	Available Items Found	
	Report Date (1)	
	Item ID (8)	
	Barcode (9)	
	Item Class Code (10)	
	Item Class (11)	
	Shelf Location Code (12)	
	Shelf Location (13)	
	Main Location (14)	
	Item Units (15)	
	Copy Number (16)	
	Item Price (17)	
	Call Number (18)	
	Call Number Sortkey (19)	
	Patron ID (20)	
	Patron Barcode (21)	
	Address Preference Flag (22)	
	Patron Type Code (23)	
	Patron Type (24)	
	Patron Full Name (25)	
	Patron Personal Name (26)	
	Patron First Name	
	Patron Last Name	
	Patron Name Prefix (27)	
	Patron Name Suffix (28)	
	Attention Of (29)	
	Patron Street Address 1 (30)	
	Patron Street Address 2 (31)	
	Patron Street Address 3 (32)	
	Patron Postal Code (33)	
	Patron City (34)	
	Patron County (35)	
	Patron State (36)	
	Patron Country (37)	
	E-mail, Primary (38)	
	E-mail, Secondary (39)	
	Language Preference (40)	
	Home Library (41)	
	Institution (42)	
	College or School (43)	
	Department (44)	
	Class or Homeroom (64)	
	Patron Primary Telephone (45)	

	Patron Secondary Telephone (46)	
	Patron Primary Specialized Telephone (47)	
	Patron Secondary Specialized Telephone (48)	
	FAX, Primary (49)	
	FAX, Secondary (50)	
	Full Patron Record (MARC) (51)	
	Processing Fee (52)	
	Holdings ID (53)	
	Holdings Units (54)	
	Hold Request Type (55)	
	Pickup Location Code (56)	
	Pickup Location Name (57)	
	Hold Expiration Date (58)	
	Bibliographic Record ID (60)	
	Part Title (61)	
	Author (62)	
	Title (63)	

Requested Overdues

Category	Circulation	
Report Title	Requested Overdues	
Output Format	HTML	
	E-mail, Primary (38)	
	E-mail with tab-delimited attachment	
Report Specific Parameters	Library Name	
	Library Address 1	
	Library Address 2	
	Library Address 3	
	Location	
	Patron Type	
	Notice Number to Generate	
	Delimiter	
	Primary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Secondary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)
	Tertiary Sort	Author (62)
		Call Number (18)
		Class or Homeroom (64)
		Department (44)
		Title (63)
		Institution (42)
		Shelf Location Code (12)
		Patron ID (20)
		Patron Type Code (23)
		Patron Postal Code (33)
		College or School (43)

VTLS

VTLS Chameleon Gateway

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For Immediate Release

Choose the Skin You're In: The Chameleon Gateway from VTLS

Blacksburg, VA, VTLS Inc., has turned the programming of the Virtua Web Gateway inside out to empower your library with the tools to design and create a customized gateway display. With the newly named Chameleon Gateway, libraries are no longer limited to a default design and a few configurable buttons. The entire face of the software can be changed to reflect the collections and personality of your organization.

The Chameleon Gateway is a product that libraries can use to effectively meet the needs of diverse patron groups. Users can access the library catalog from their offices, schools, libraries and homes. Navigation of library resources is made easy through user-friendly and intuitive screens.

Features of the Chameleon Gateway include:

- A library customizable interface.
- Multiple search options
- Easy to read cross-references
- Access to library catalogs worldwide
- A cart where users may save records or search results for later viewing, printing, or emailing.
- Multimedia access and security.
- The Chameleon Gateway's flexible format lets users customize the entire look and feel of the interface.

The Chameleon Gateway's use of "skin" technology allows the individual library to offer a variety of customized interfaces and allows the end-users to choose the one that best meets their individual needs. Experienced researchers and "Power Users" could choose an "academic" oriented interface, while children might search the catalog through a specially designed "child-friendly interface." By creating or modifying a skin, the library can make the Gateway match the appearance of the library's web site, provide targeted Web sites for particular segments of patrons (children, visually impaired, etc.), and grant or deny access to selected Gateway features. Every library can build its own personalized web portal. Options are available to customize the logo and title of the gateway on the Splash screen; customize the background color; add graphics; customize the text of the buttons and labels; limit the catalogs viewed by patrons; and change the language in which the library catalog is viewed.

VTLS Inc.

VTLS Inc., (www.vtls.com) is an ISO 9001 registered company. VTLS develops, markets, and supports solutions for managing library collections and accessing information via computer networks. VTLS solutions include Virtua ILS – Integrated Library Systems, Visual MIS – Multimedia and Imaging Solutions and Vista CPS – Companion Product Suite. VTLS is a corporate member of the American Library Association, a voting member of NISO, and a charter member of CNI. A diverse customer base of more than 900 libraries, located in 32 countries give VTLS a global perspective of the industry and compels the company to abide by strict international standards.

VTLS

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For Immediate Release

VTLS Inc. Announces Support For Windows 2000 Operating System for Its Virtua Client Products

Blacksburg, VA. VTLS Inc., is pleased to announce its support for the Windows 2000 operating system in all its Virtua client products. Full Unicode support will be provided using Windows 2000. Users of VTLS' third generation system, Virtua will be able to support any or all languages within the same database. These languages are based on Arabic, Chinese, Cyrillic, Greek, Hebrew, Japanese, Korean, Latin and Tai. Both left to right and right to left languages are supported.

Whereas Windows 2000 supports Unicode, the Virtua products also operate under Windows NT. All languages except right to left languages such as Arabic and Hebrew are supported within the NT environment.

With the availability of Windows 2000, VTLS is withdrawing support of its full Unicode implementation within the Windows 95 and 98 operating systems. The Virtua client continues to operate within Windows 95 and 98 for those customers supporting the native character set only. For those VTLS customers only implementing two languages, Virtua will also operate under the language of their choice. For instance, Virtua will continue to support Windows 95 with Chinese for support of Chinese and English, and Windows 95 with Hebrew for support of Hebrew and English.

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VTLS

NDLTD

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For Immediate Release

VTLS Partners with Virginia Tech on NDLTD

Blacksburg, VA. VTLS Inc., is pleased to announce its partnership with Virginia Tech to promote and provide a union database for access to The Networked Digital Library of Theses and Dissertations (NDLTD). The NDLTD is an international federation of member universities and other institutional members who wish to improve graduate education, promote access to scholarly research, increase sharing of knowledge, help universities build their information infrastructure, and extend the beneficial impact of digital libraries. Established in 1997, NDLTD has grown to more than 100 members, with new additions occurring regularly. Today's members come from 18 nations.

NDLTD was established through a research project of Virginia Tech in 1997, with Principal Investigators Dr. Edward A. Fox, Department of Computer Science, Dr. John L. Eaton, Graduate School, and Gail McMillan, Digital Library and Archives.

Fox said, "As NDLTD continues its rapid expansion, and extends it services to members, we are pleased to discuss with VTLS new ventures of mutual interest." Eaton said, "The ETD project is an excellent way for Universities to let their scholarship be known to the world. In the past, much of this information has been unavailable to researchers." McMillan said, "Online thesis and dissertation is an easy way for libraries to improve user services. Our experience with this project has been very positive".

VTLS Inc. has been invited to serve on the Steering Committee of NDLTD. Dr. Vinod Chachra, president of VTLS Inc., will be the VTLS representative on the Steering Committee. VTLS will be actively involved in promoting NDLTD among its customers worldwide. VTLS will also begin to host a union database of electronic theses and dissertations. Contributions for this database will be invited from the libraries participating in the NDLTD project. VTLS is uniquely equipped for this activity due to the comprehensive support of Unicode in its Virtua ILS - Integrated Library System. Unicode encoding allows data to be entered into a single database in any language, including non-Roman languages like Arabic, Chinese, English, Greek, Hebrew, and Russian.

"We are delighted to have the opportunity to provide such a valuable service to the worldwide research community," said Chachra. "Close cooperation with Virginia Tech is always a heartwarming experience for an alumnus of the institution."

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NDLTD

NDLTD (www.ndltd.org and www.theses.org) is a membership organization with 4 Consortia, 13 Supporting Institutions and over 80 Universities/libraries that are members. Its purpose is to promote the creation of electronic theses and dissertations (ETDs) by all students around the world; the development of supporting programs and infrastructure at libraries, universities and other interested institutions; and the sharing of research results through ETDs and other resources made accessible through digital library technology. Eventually it is hoped that hundreds of thousands of ETDs will be prepared yearly, written in all the languages of the globe, and be shared to promote knowledge, scholarly communication, and understanding. All interested parties are invited to join NDLTD and to help in this endeavor.

VTLS

GEMPLUS

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For Immediate Release

VTLS PARTNERS WITH GEMPLUS

Offers RFID Technology For Libraries

Blacksburg, VA, July, 2000 -- VTLS Inc., a leader in client-server integrated library automation solutions, announces a partnership with Gemplus, the world's leading manufacturer of RFID tags and smart labels operating at 13.56 MHz. According to the terms of this agreement, VTLS will incorporate into their product offering the radio frequency identification (RFID) technology based on Gemplus' smart labels and hardware. The solutions by VTLS/Gemplus have an open architecture allowing them to be plugged into most library automation systems. Because of this open architecture, VTLS Inc. will market and sell these solutions to libraries regardless of their current automation system and to companies within other horizontal markets.

Gemplus smart labels are paper thin, flexible and incorporate ultra small RFID chips. Gemplus smart labels can be applied directly into library books and can be read either visually or through material layers via an RFID scanner. VTLS/Gemplus' RFID solutions for libraries include book borrowing stations, handheld scanners for on-the-shelf inventories, theft detection gates and book return chutes. Benefits of the solution include greater effectiveness and efficiency for the library staff, identification of misplaced items, ease of inventory controls, an increase in book availability, reduction of operating costs and patron self-service capabilities.

Gemplus has been developing RFID solutions for various applications for 15 years and has since built a solid network of partners, all experts in their application fields. "We are extremely pleased to be partnering with VTLS," said Jean-Pierre Durbesson, Worldwide Sales Director for Gemplus. "VTLS has the software, services and the extensive knowledge of automation systems we were looking for. Their solutions and expertise combined with Gemplus' proven leadership in the design of RFID systems makes our partnership the best offer on the market."

Vinod Chachra, president of VTLS, Inc. said, "We know that RFID technology is the wave of the future and many libraries will embrace it due to the time saving benefits it brings to their day-to-day operations. We are happy to take a leadership role in bringing this technology to libraries. With its proven record of market leadership, continuous product innovation and leading-edge technology expertise, we expect Gemplus to be a very valuable long-term partner."

VTLS and Gemplus have their first joint customer, a medium-sized public library. This library will begin using the full product line beginning October 1. Details regarding the progress of this initial implementation will be forthcoming.

Gemplus Corporation

Gemplus S.C.A. (www.gemplus.com) is the world's leading provider of conventional and smart card-based solutions with a 37% market share (by units sold, source: Dataquest 1998). Gemplus sells magnetic stripe cards, memory and microprocessor-based smart cards, smart contactless cards, RFID tags and smart labels as well as smart objects. The company also designs and markets software, development tools and readers.

Gemplus Tag, a division of Gemplus specializing in RFID (radio frequency identification) technology, has a worldwide network of over one hundred business partners and distributors dedicated to offering the best turnkey solutions for the identification of objects through RFID. Additionally, the company promotes open systems to facilitate the development of applications and is a key player in the acceptance and standardization for smart labels.

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For Immediate Release

VTLS Inc. Announces Partnership With Pigasus Software, Inc.

Blacksburg, VA – VTLS Inc. and Pigasus Software, Inc. are pleased to announce that Pigasus' WINGS™ Request Management System is now integrated with the Virtua Chameleon Gateway and is available from VTLS Inc. Under the terms of an agreement recently finalized between the two companies, VTLS may include the WINGS interlibrary loan and document delivery software package with the VTLS Virtua system.

Vinod Chachra, president of VTLS Inc. said, "During the last year we investigated ILL software offerings for possible integration with our Virtua product line. We feel that the solution offered by Pigasus is very attractive and easy to use. It integrates well with Virtua's Chameleon Gateway and allows users to seamlessly navigate between local and remote information resources. " Referencing the industry standards noted below, Chachra said, "Pigasus is committed to national and international standards which has always been the corner stone of our products. We are pleased to provide this important ILL functionality to our users."

The WINGS Request Management System is a web-based software package that facilitates the communication of document delivery, ILL requests and related messages between users and libraries, and between libraries and other libraries or document suppliers. The WINGS system supports a variety of communications protocols used in the ILL community, including ISO 10160/10161 and ERP (the Extended Request Protocol). The ISO

communication allows the WINGS system to communicate with major utilities including OCLC, DOCLINE, and RLG. In addition, the WINGS system communicates with proprietary systems such as Aviso and Melvyl.

The WINGS system offers libraries a full and flexible solution for request management including: browser-based user interfaces for staff and patrons; web-based QUEST™ Holdings links for item verification; FLASH importers for many sources including OVID and SilverPlatter; a choice of robust underlying databases; and strong statistics and reporting functions.

Candy Zemon, president of Pigasus Software, Inc., said, "We are delighted to announce this relationship with VTLS, a company well-respected internationally for its integrated library system products. The technologies and architecture used by both companies work well together, giving the library using the VTLS Virtua system a powerful and flexible ILL solution in the WINGS package."

Pigasus Software, Inc.

Pigasus Software, Inc.,incorporated in 1997, develops and supports the WINGS system solution for problems surrounding interlibrary loan and document delivery. Its current customer list includes libraries of all types (corporate, government, special, academic, and public) in the United States and Canada. Pigasus Software, Inc. is located at 65 Charleston Square, St. Charles, MO, USA and on the World Wide Web at www.pigasus.com.

VTLS Inc.

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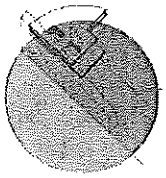
VTLS



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For Immediate Release

VTLS Joins in the Rebuilding of the Bibliotheca Alexandrina

VTLS Inc. and the General Organization of the Alexandria Library (GOAL) have reached an agreement to deploy VTLS's Virtua product as a part of the ongoing effort to revive the ancient library of Alexandria. Begun in 1987 as a project of the Egyptian Government and with the cooperation of UNESCO and UNDP, the new Bibliotheca Alexandrina will serve as a center of culture and civilization for Egypt, the Mediterranean and the entire world. Through the awarding of a special grant, VTLS will be joining with these international organizations as the new Bibliotheca Alexandrina prepares to welcome the scholars of the world.

In a statement, Prof. Dr. Mohsen Zahran, Project Director for the Bibliotheca Alexandrina, said that Virtua "will be the ultimate key to unlock the doors of knowledge of human heritage, which the Library is now preparing. It will enable local and remote users everywhere to access its unique collections in the on-line public access catalogue (OPAC). The Virtua software covers all the Library's needs for a multi-lingual (Arabic, English, French) integrated information system with its cutting edge technology and applications."

"By implementing Virtua, the Bibliotheca Alexandrina has taken another step toward reclaiming its birthright as one of the world's elite libraries and setting the standard for other libraries to follow," noted

Jack Bazuzi, Vice-President of VTLS Inc. "VTLS is proud to participate in the rebirth of the greatest library of the ancient world."

When fully implemented, the Bibliotheca Alexandrina will use the complete array of Virtua functionality, including the functional subsystems of OPAC, Cataloging, Circulation, Serials Control and Acquisitions with EDIFACT support. Virtua's full Unicode compliance will allow the Bibliotheca Alexandrina to serve researchers worldwide, allowing full support not only for Arabic, French and English, but for Russian, Greek, Chinese and the many other languages supported within Unicode – both in the data and for the user interface.

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VTLS Inc., (www.vtls.com) is an ISO 9001 registered company. VTLS develops, markets, and supports solutions for managing library collections and accessing information via computer networks. VTLS solutions include Virtua ILS (Integrated Library Systems), Visual MIS (Multimedia and Imaging Solutions) and Vista CPS (Companion Product Suite). VTLS is a corporate member of the American Library Association, a voting member of NISO, and a charter member of CNI. A diverse customer base of more than 900 libraries, located in 32 countries gives VTLS a global perspective of the industry and compels the company to abide by strict international standards

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Acquisitions & Fund Accounting

Virtua Integrated Library System

Vista Companion Product Suite

Visual Multimedia & Imaging Solutions

Workflow Simplicity and Adaptability

Virtua's graphical user interface provides an intuitive, familiar work environment with the use of tabs, floating menus and many additional access points, allowing quick travel through the database.

Virtua's flexible design supports a variety of workflows. It accommodates repetitive workflows as well as integrated workflows where you can move from creating a purchase order to receiving to invoicing to paying without reentering any information. If your library is set up to assign a staff member to perform only one step repeatedly in the acquisitions workflow, you will appreciate Virtua's support of repetitive workflows for purchase orders, receipts, invoices and payments.

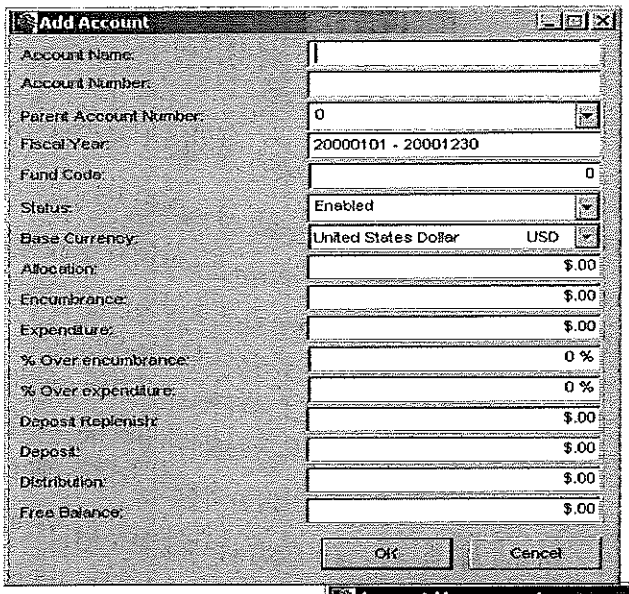
Account Structure

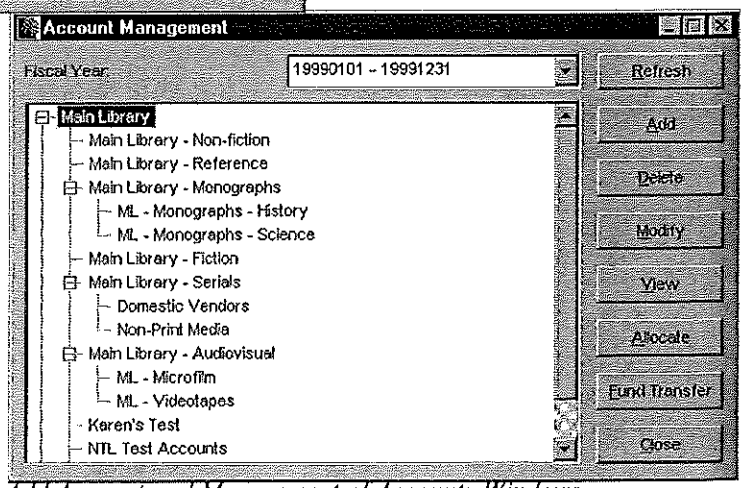
Virtua's account structure is truly flexible, imposing no limits on the levels of accounts or the number of accounts allowed. Individual libraries or locations can maintain separate and mutually exclusive fund account hierarchies with single or multiple tier accounts. You can even open multiple fiscal years at the same time. Virtua also accommodates deposit accounts and issues a prompt to replenish funds when the minimum balance that your library has determined is reached.

Accounts can be set up to accommodate different currencies, while a foreign currency exchange rate table simplifies the conversion process for accounting processes.

Vendors and Orders

Virtua has simplified the creation of order records. You can add items to the orders by simply dragging and dropping items from your own catalog. If you need to retrieve the records externally, you can search sources such as OCLC, Books in Print and CD-ROM databases, download their cataloging records, and then save them to your database. If you want to create a new bibliographic record (Standing orders, monographic sets and/or planned orders do not require a bibliographic record prior to ordering.), the click of a button takes you to the full-screen editor in cataloging for the immediate input of brief bibliographic information. You can then simply drag and drop





Add Account and Management of Accounts Windows

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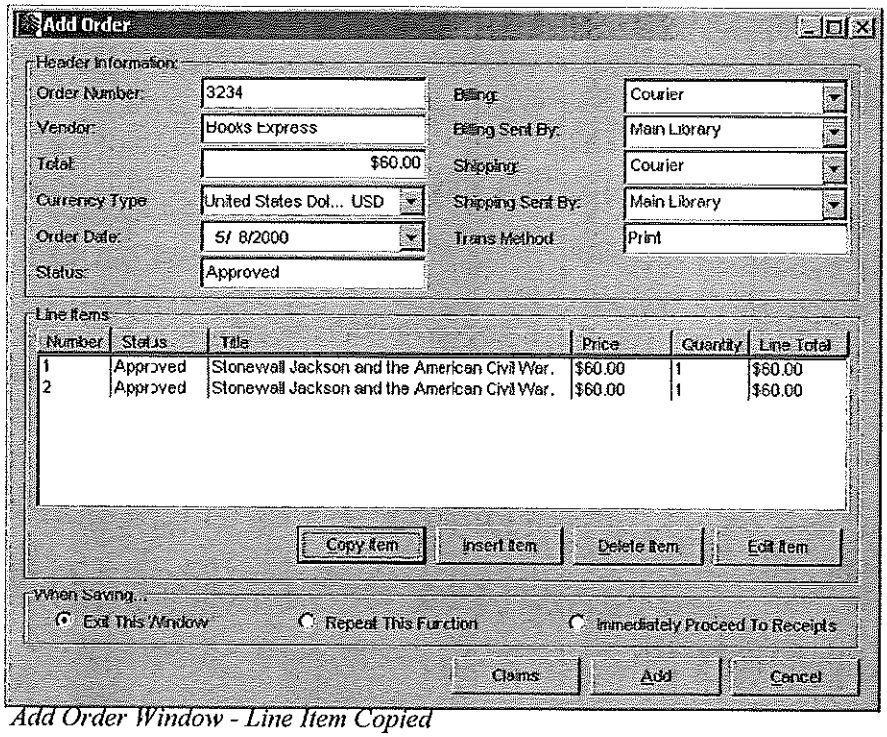
records from your own catalog to the purchase order.

Virtua is flexible and adapts to your priorities. For example, Virtua allows you to customize many areas of acquisitions such as:

- purchase order id numbers
- purchase order forms
- taxes and postal charges
- over-encumbrance levels per fund account
- claim letters
- over-expenditure
- status



Add Order Window - Line Item Copied

Vendor records, stored in a 2709 format, are also adaptable, giving your library the capability to define the record content with an unlimited number of fields. A specific default vendor with default due dates can be assigned to each staff member, while a full-screen editor is available for the creation and modification of vendor records.

To make ordering even easier, orders can be standard or prepaid. To expedite ordering, Virtua accommodates a variety of purchase order types that require different workflow processes such as approval plans, blanket orders, and gift items. For example, if the order is a blanket order or an approval plan order, or if you want to receive the order automatically upon saving, you simply select the radio button, "Immediately Proceed to Receipts" on the Update Order window. Then click the Save button and the Receipts window appears.

Virtua also gives you flexiblity. You may have an unlimited number of line items on a purchase order, copy a purchase order, copy a line item for another location, and assign special statuses to purchase orders. And any order, even for a single item, can be charged to multiple accounts. For instance, the Copy purchase order feature allows you to copy a purchase order to resubmit it to a vendor for a cancelled order or order the same items from another vendor if your regular vendor does not have the items.

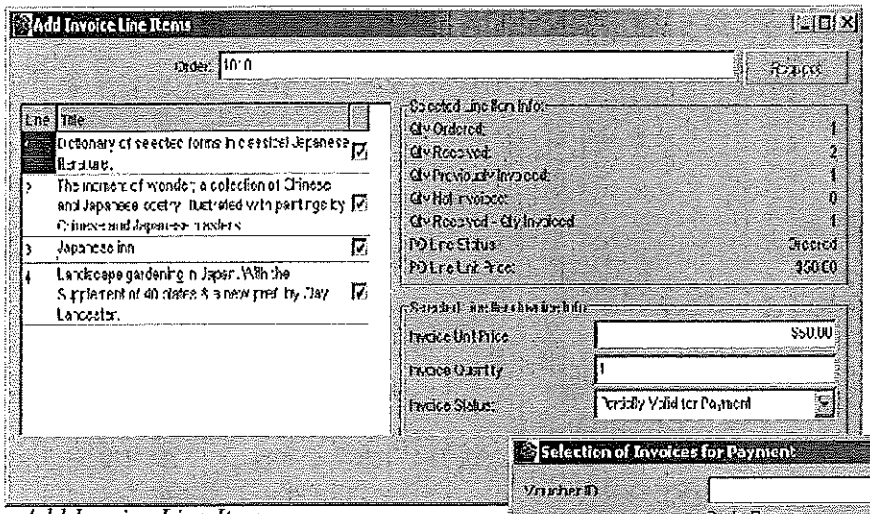
Virtua also integrates your library's data. When a purchase order process is begun, fields from the vendor record automatically populate the header of the purchase order. In addition, the software also pulls the appropriate bibliographic fields for line items on the order record so that the user may look at detailed information regarding the line item.

Receiving and Invoicing

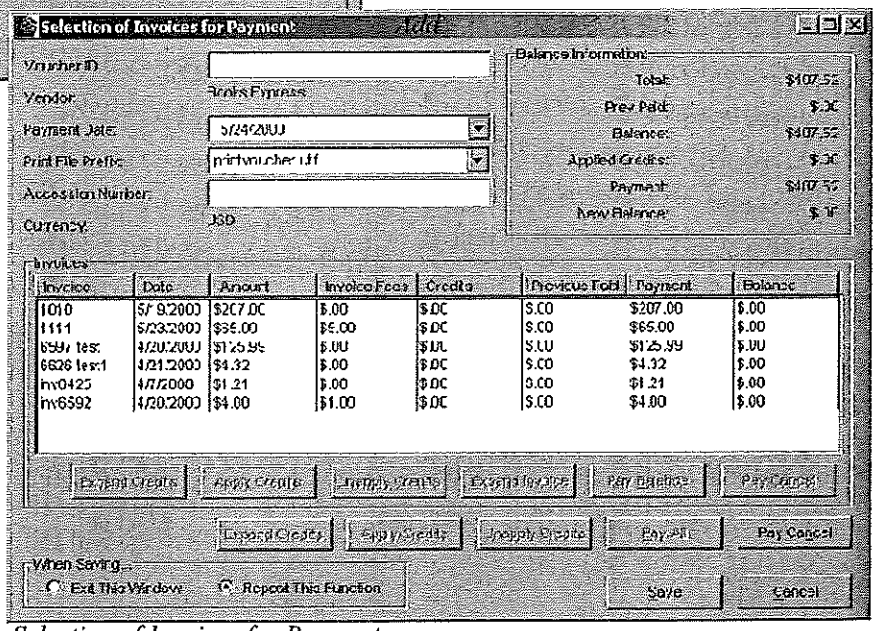
Receiving just got easier for you. Virtua's Express Receive allows you to select and receive any number of line items or all line items on a purchase order at once. You can even receive multiple copies of an item, even if each has a different status such as "good condition," "damaged," or "duplicate." Items can also be added to the "new books" or "acquisitions" list from the receipt

screen. A history screen is part of the receipt window. It shows you the receipt status for each line item on a purchase order.

Virtua's invoicing steps take full advantage of the vendor record format created by VTLS. All invoices are linked to a vendor and purchase order record. When creating the original invoice, users simply call up the vendor, type in the invoice and purchase order number and all relevant information is accurately displayed from the purchase order. You then have the choice of paying for only certain line items or the entire invoice. Any line items not paid are archived and remain part of the invoice. Users may also choose to pay all invoices from a vendor. An expanded view of any line item shows all charges or credits placed against the line item. You may edit these figures from the expanded view and then resave the line item to the invoice. The invoice and line item totals are automatically updated.



Add Invoice Line Items



Selection of Invoices for Payment

Accessibility to External Sources: Moving Toward a Paperless Office

As the trend toward creating paperless offices continues, we have designed Virtua to minimize the continuous flow of paper notices and reports moving in and out of your office. Virtua incorporates the EDIFACT Standard for Electronic Data Transfer, allowing the immediate electronic transmission of order, invoice, claim and payment records for monographs and serials. Libraries that need to continue to send faxes and print letters, may do this in addition to sending the orders electronically. Your library may choose the format.

Advanced Functionality with Ease of Use

Also of importance is the level of functionality Virtua supports. While the acquisitions and fund accounting subsystem is sophisticated, it is simple to use because of the GUI and elegant workflow processes.

Instead of struggling with complicated procedures, you can direct this subsystem to perform much of the work, giving you time for other activities. For instance, automatic claiming is an option, or you can review reminders before issuing claims.

In the future, Virtua will automatically create holdings records for serials order types once the purchase order has been saved. Also, acquisition records will be masked from the OPAC with tag level masking available at the library's discretion as well as masking from individual users.

Security

Because of the private information acquisitions and fund accounting contains, security is also significant. Virtua provides a sophisticated and secure solution with the use of a permissions matrix that designates the capabilities for all of the staff members using that subsystem. Your library defines the permissions assigned to each user, allowing you to determine what screens and records any individual can access and/or modify.

Acquisitions Reports

To track acquisitions and fund accounting activities, Virtua provides a comprehensive set of reports that inform you of the status of subscriptions, orders, claims, receipts, invoices, payments, fund accounts, and vendors. Performance statistics can be viewed online and are updated automatically. In addition, with Virtua's built-in report writer, you can generate an unlimited number of library-definable reports in customized formats.

Integration with Other Subsystems

Because many of the acquisitions and fund accounting functions are tightly integrated with serials control activities, Virtua combines the two subsystems into one tool bar. You can perform all activities related to the acquisition of serials without having to engage another subsystem. The acquisitions and fund accounting subsystem is also tightly integrated with other Virtua functions, allowing quick movement between functions in different but related subsystems. This eliminates time-consuming efforts to find information in other areas of the database. For example, you can immediately initiate an OPAC search from most acquisition screens. From the OPAC client, you can execute acquisitions searches on vendor name and id and in the future on purchase order id, order type, order date (range), requester, and status. This focus on intuitive cooperation between functions provides a seamless transition for the acquisitions and fund accounting librarian.

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Virtua Vista Visual

Cataloging

Virtua Integrated Library System

Vista Companion Product Suite

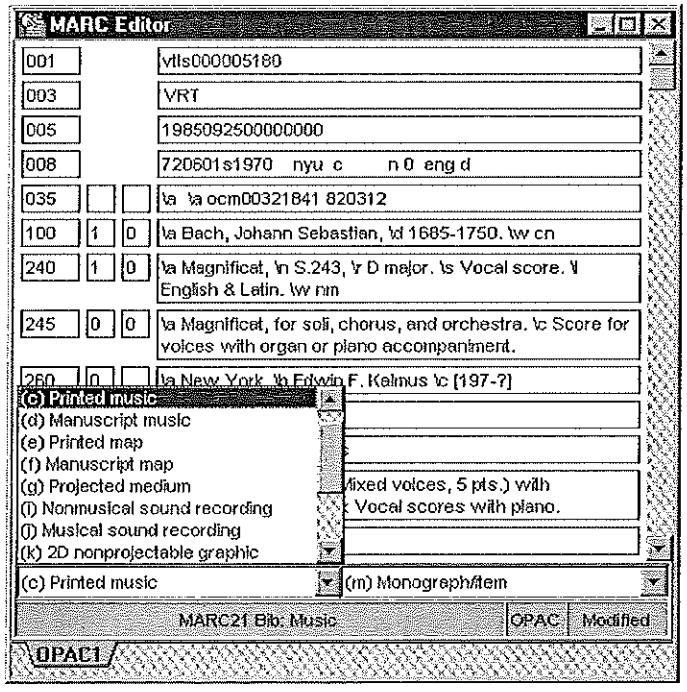
Visual Multimedia & Imaging Solutions

A System Designed for Catalogers

Emerging information formats and technologies are challenging catalogers to expand their talents into new areas, and Virtua, from VTLS, has been specifically designed to help meet these challenges.

Access to Tools and Information

A key concept behind Virtua Cataloging is seamless access to tools and resources from a unified set of



screens. Catalogers can directly access external copy cataloging data from within the Virtua software. Interfaces are included for a variety of sources, such as Online Bibliographic Utilities and CDROMS including:

- Bibliofile
- OCLC
- RLIN

Electronic versions of cataloging rules and authorities such as LC's Cataloger's Desktop can be searched directly without exiting Virtua. The F1 key takes the user directly to the online help system which follows the text of LC's USMARC Concise Formats, searchable by hypertext "hot links."

Unique Data-Entry Templates

The design of Virtua adheres to the VTLS philosophy that each library is unique. To this end, Virtua includes powerful options for customizing the software to better support local work processes. The full MARC editor provides wrap-around text editing capabilities, variable size edit boxes, and a special display for bib-level and type fields. The MARC editor also supports preset work forms that contain fixed data that can be edited to suit local needs. Your library can define an unlimited number of original cataloging workforms for various record types and materials formats. Workforms can also be designed for specialized needs, such as monographic series, metadata (such as Dublin Core) and institutional publications, enabling quick and uniform cataloging of new receipts.

Multiple workforms can be kept open simultaneously, so that data can easily be "cut-and-pasted" between records. The fixed field editor allows a formatted display of fixed field elements that can be individually edited. The layout and display in the editor change with each record format. Your library can choose to have certain users catalog with the MARC Editor and some who will catalog using the labeled editor. The labeled editor supports easy-to-edit layouts of MARC records for novice users of the MARC format. It maps the MARC record into a user-defined, label-based editor where each tag and subfield can have a separate label. Data entry prompts, field descriptions, and context-sensitive

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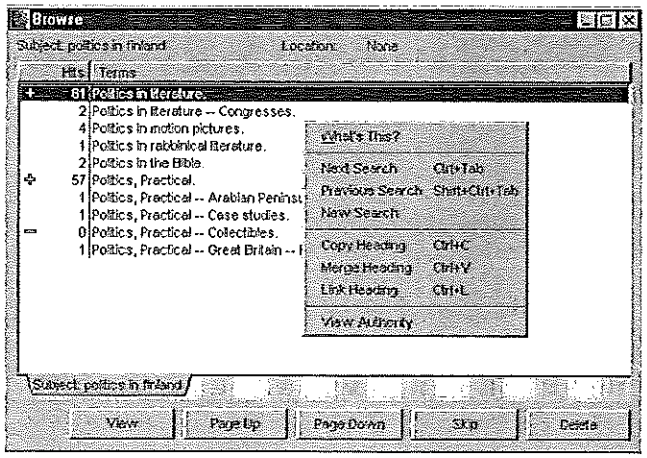
help screens can all be customized by the library.

Unicode Standard

Virtua's cataloging system supports the character repertoire of the Unicode(TM) standard or any single Windows-based code page. The client comes with a translator which converts copied or imported records in standard Windows character sets to Unicode. Extensions are available to import the full ALA character set and automatically translate it into Unicode prior to storage.The Unicode standard supports many characters. The keyboard, on the other hand, is limited to a single language. In order to facilitate the editing of records containing words and characters from multiple languages the software allows for easy switching of keyboards. A virtual keyboard can also be displayed if required.

Built for the Cataloging Workflow

After creating or editing records with the label editors, newly created or modified records can be held until reviewed and approved by a senior cataloger, after which they are added to the permanent database. A bulk record display allows the cataloger to view all records in a file and select some or all of them to edit or save directly to the database. Alternatively, new cataloging copy can be saved to a hard or floppy disk file. These saved files can be uploaded to the server at a later time through a batch job process.

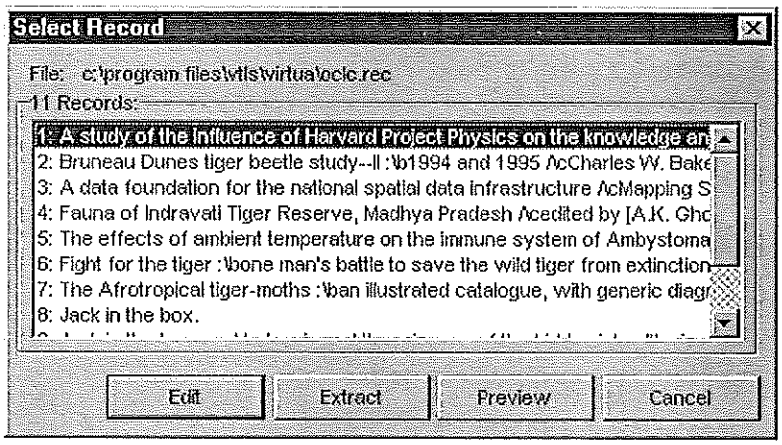


Validation of Cataloging Copy

Since accurate data input is so critical to the proper functioning of the library catalog, Virtua includes a comprehensive rules-based validation subsystem that allows the validation of content designation for any type of record stored in MARC format. The system offers rules for validating record types including:

- Bibliographic
- Authority
- Holdings
- Community Information

More than 3,000 rules have been written for bibliographic records alone. Users can also create



and modify their own validation files.

A Completely Integrated System

Like all of Virtua's subsystems, the Cataloging module is fully integrated with all other system functions. Catalogers will particularly make use of the Virtua OPAC to take advantage of its advanced searching features. This is very convenient for retrieving records for editing, verifying authorized forms of headings, and merging records and headings. The Virtua OPAC interface can also be used to search remote library databases that support the Z39.50 protocol, as well as locally

mounted secondary databases and selected online database vendors and CD-ROMs (see above). Virtua's security permissions matrix controls which parts of the system individual users have access to, but in all cases moving between functions and subsystems is simply a matter of a few simple keyboard commands or mouse clicks.

Support for Standards

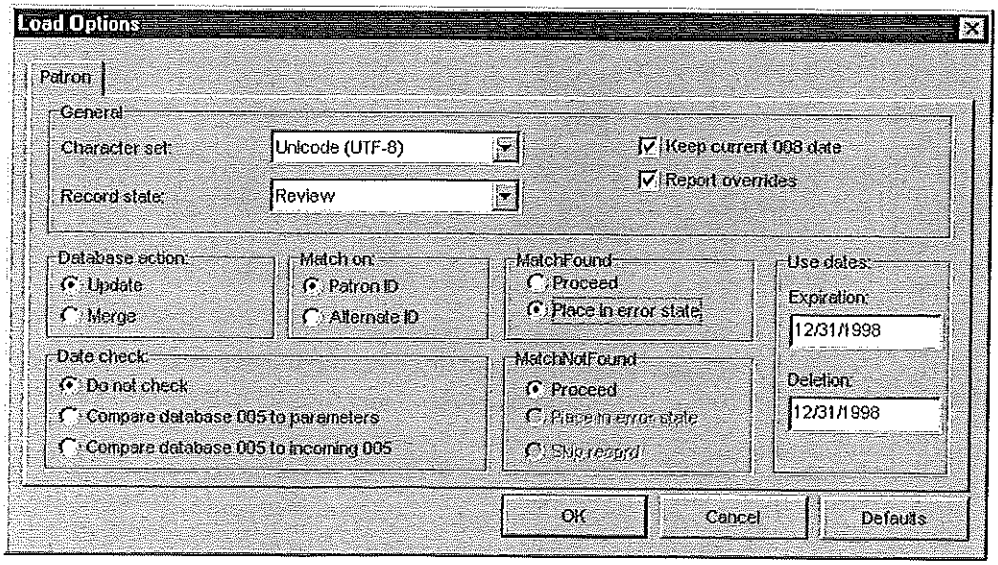
Virtua supports all industry standard record formats, character sets, and classification schemes. The system can accommodate all MARC21 bibliographic formats (Serials, Music, Maps, Mixed materials, Books, Visual materials and computer files. In addition, Virtua accommodates many versions of the MARC standard including, USMARC, UKMARC, CANMARC, CATMARC, SWEMARC and many others. Virtua conforms to the MARC21 Formats for Authority Data, Community Information, and Holdings Data. Virtua also imports, stores, and exports the complete MARC record without any data loss.

Intelligent Authority Control

Virtua allows your library to manage complex authority data with ease. Catalogers can browse all existing headings with the powerful searching features of the Virtua OPAC. Authority files external to your main bibliographic database can also be maintained, whether on tape, CD-ROM, or loaded as a secondary Virtua database. You can select products from a wide variety of authority data vendors, such as the Library of Congress. As new cataloging records are created, Virtua can check the contents of all MARC tags that are under authority control against the bibliographic database and against these external authority files. Headings that fail this authentication procedure can be merged with other authorized headings, edited locally by the cataloger, discarded, or approved for addition to the database "as is."

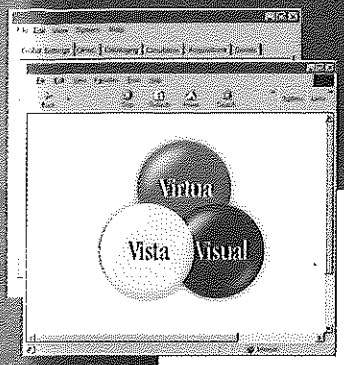
A System for Today's Libraries

VTLS is a leader in helping libraries move into the emerging multimedia information environment, and was the first library automation vendor to provide full multimedia support in our products. Virtua optimizes access to sound, text, and graphic image and video files, as well as Internet sites of all types (web pages, gopher servers, FTP servers, etc.) through the 856 MARC field. This allows cataloging staff to integrate the riches of the local library database with network-accessible information resources around the world, truly creating a virtual library.



Powerful Security Features

Virtua emphasizes sophisticated user access controls, including security by individual users, user groups, and library locations. The ability to make modifications to all types of records and system settings is controlled by a security permissions matrix, which filters screen displays and menu options. The available security features are so comprehensive that it is even possible to restrict which system users have the authority to edit individual MARC tags.



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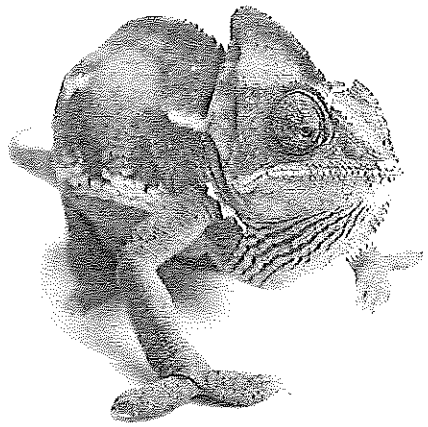
Chameleon Gateway

VTLS has turned the programming of the Virtua Web Gateway inside out to empower your library with the flexibility needed to design and create a custom-made display interface of your own. With the newly named Chameleon Gateway, libraries are no longer limited to a default design and a few configurable buttons. The entire face of the software can be changed to reflect the collections and image of the organization.

Flexible Interface

The Chameleon Gateway is a product that libraries can use to effectively meet the needs of diverse patron groups. Users can access the library catalog from their offices, schools, libraries, and homes. Navigation of library resources is made easy through user-friendly and intuitive screens. Features of the Chameleon Gateway include: a library customizable interface; multiple search options; multi-media access; security; easy to read cross-references and access to library catalogs worldwide. The Chameleon Gateway also features a cart where users may save records or search results for later viewing, printing, or emailing.



VTLS Chameleon Gateway

The Chameleon Gateway's use of "skin" technology allows the individual library to offer a variety of customized interfaces and allows the end users to choose the one that best meets their individual needs. Experienced researchers and "Power Users" could choose an "academic" oriented interface, while children might search the catalog through a specially designed "child-friendly interface". By creating or modifying a skin, the library can make the Gateway match the appearance of the library's web site, provide targeted Web sites for particular segments of patrons (children, visually impaired, etc.), and grant or deny access to selected Gateway features. Every library can build its own personalized web portal. Options are available to customize the logo and title of the gateway on the Splash screen; customize the background color; add graphics; customize the text of the buttons and labels; limit the catalogs viewed by patrons; and change the language in which the library catalog is viewed.

Multimedia

The VTLS Chameleon Gateway is a Web OPAC designed specifically with image collections in mind. The Chameleon Gateway is based on a series of innovative system architectures chosen for their emphasis on ease of use, natural workflow processes, adherence to industry standards, and ready exploitation of the speed and sophistication of graphical user interface (GUI) workstation environments.

VTLS Inc. has designed the Chameleon Gateway to meet the present and future demands of multimedia information access through the Internet and its growing use by library patrons. Any user who has a connection to the Internet and an appropriate WWW browser can search your image collections as well as other Z39.50 compliant databases. Ideal for research-based universities, historical societies, museums and community-focused libraries, the Chameleon Gateway redefines library access. The Chameleon Gateway easily integrates multimedia into the OPAC. Through a direct link from the bibliographic record to the multimedia file, a patron

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can easily see photos, maps, documents, abstracts, art prints, manuscripts and even hear and see sound and video clips. The multimedia files can be stored on a workstation, server, or anywhere on the Internet. This linking feature makes it easy to integrate the access of multimedia from any source into your library's resources.

Accessibility

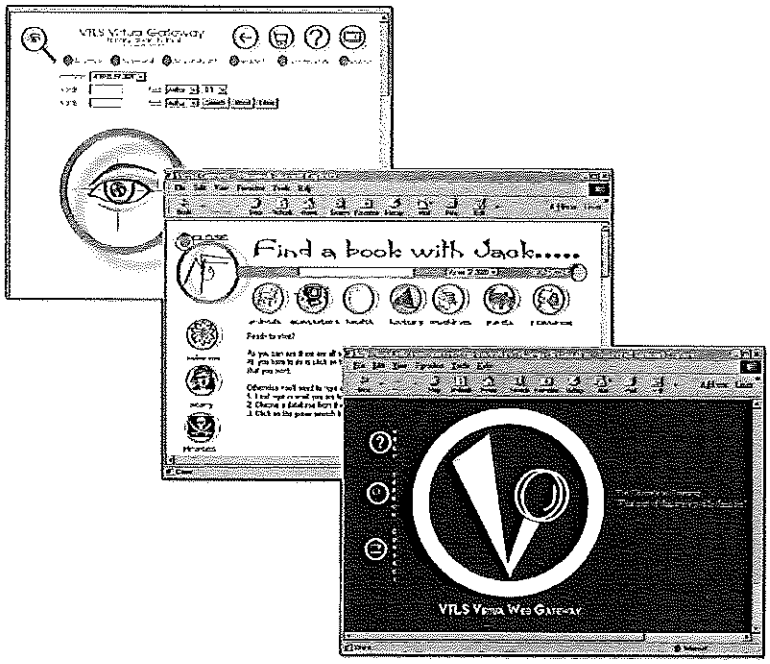
The Chameleon Gateway works well within today's information rich environment and makes searching your library's digital collections fun, easy and accessible to virtually anyone. Moreover, since the Chameleon Gateway is Z39.50 compliant, you can also give your users access to other databases using the familiar and easy-to-use VTLS interface.

Ease of Use

The Chameleon Gateway allows you to provide access to your collections through a windowed environment using World Wide Web conventions that are familiar to web-surfers. Navigation of your library's resources is easy through user-friendly and intuitive screens. No instruction on using the browser is necessary, making it an ideal access point outside the library or campus. Because all screens can be configured to your organizations liking, you can create collection help screens, navigation aides, historical footnotes or whatever you feel would assist the user in navigating the material.

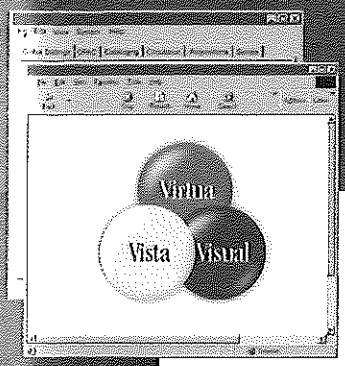
Multiple Language Support

The Chameleon Gateway is built for international use allowing users to change the language of the interface for searching. By clicking an alternate language on the web page, all buttons, prompts and search facilitating windows are changed to the selected language. There are currently 8 language translations available with more on the way. Sites also have the ability to create their own language. This is especially useful if an organization uses unique industry terminology and users are more familiar with those terms than standard library search strategies.



Searching

The Chameleon Gateway accommodates a variety of search strategies, from simple keyword and browse searches to complex Boolean and word combination searches. This flexible format makes it easy for your library to accommodate users with varying degrees of computer research skills.



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Circulation

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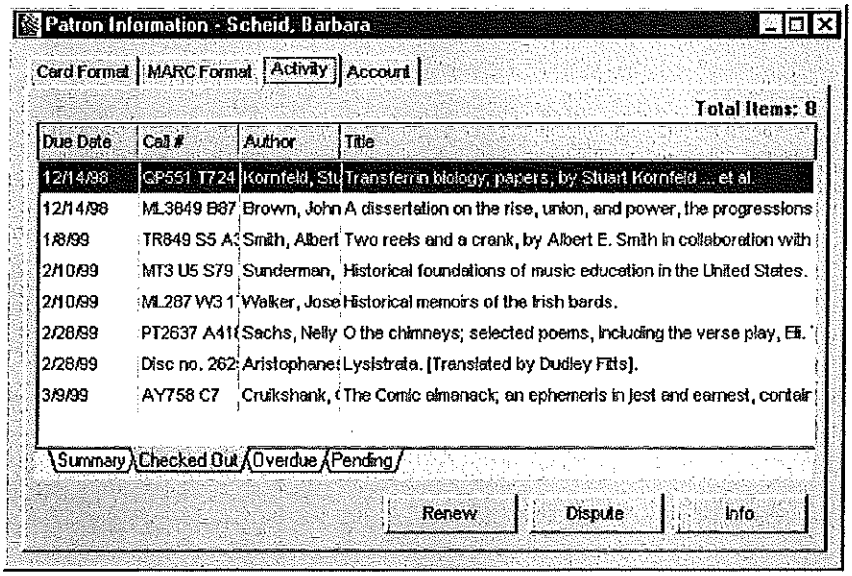
Designed For the Circulation Desk

Workflow flexibility is optimized in the Virtua Circulation system. The system uses matrices to circulate the holdings of your library. These matrices are made up of parameters set by your library that define patron, item and location specific information. Options for patron views and patron circulation privileges give your library the flexibility to customize the software to your operational environment. The Circulation system automatically checks these parameters for each circulation transaction allowing you to provide prompt and accurate help to patrons.

Functionality made Easy

With Virtua's Circulation system your workflow is easy to follow. A click of the mouse, a combination of key strokes or the use of "hot keys" will take you to the beginning of any circulation workflow process. "Wizards" for staff and user-initiated services make transactions even easier to follow. Using any of these methods, the staff can then quickly:

- checkout/in books
- print checkout receipts
- renew materials
- add/edit patron records
- add/collect fines/fees
- place a hold/request
- dispute transactions
- waive transactions
- search the OPAC
- view the audit trail
- view patron records
- view the transaction log



Patron Record Information Screen displaying the Checked Out Tab under the Activity View which displays all items currently checked out to a Patron.

Check-outs, Check-ins and Renewals

The Virtua check-out function uses due dates based on the patron + item class + location parameters matrix. Librarians may override the system-defined due dates by manually entering a new due date or by setting a fixed due date. Transactions are executed in real time and library staff can view the patron information directly from the item record. Patron self-check-out workstations such as 3M and user-initiated transactions are also supported. Currently, Virtua supports version 1.0 of the 3M protocol including renewals and magnetic media. Before Virtua discharges an item at check-in, it checks the item to:

- Verify that it has been checked out.
- Compute any overdue fines.
- Post overdue fines to the patron fines record.
- Assign the appropriate status to the item record.

The operator is also alerted both audibly and visually by the system if the item has a status of anything

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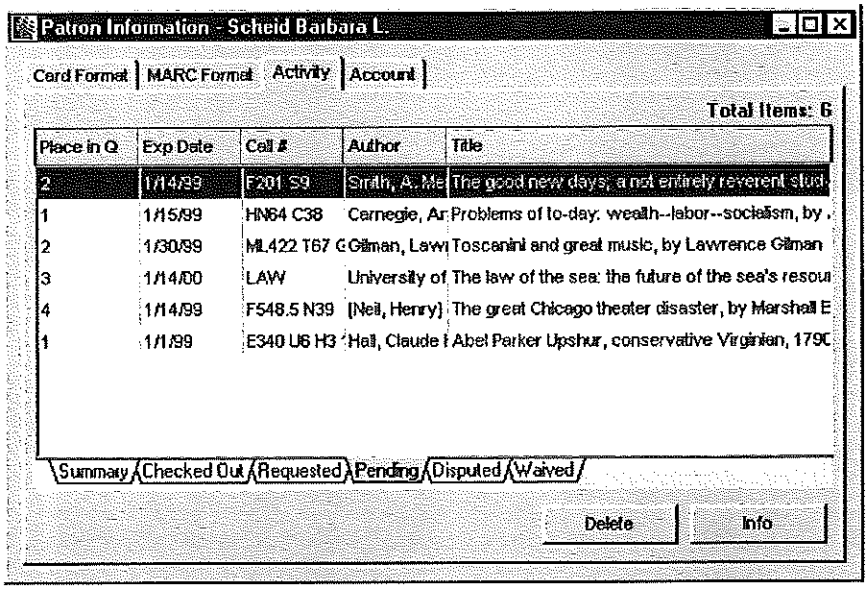
other than available. Renewals can be placed by staff and/or patrons. You can renew on an individual item, selected items, or all items checked out to a patron. Renewals may take place in real time or batch and are governed by the same circulation checks/parameters as the checkout activity. Your library determines the renewal limits at the patron, item class and location levels. The system does not allow renewals for items with outstanding hold, recall or loan requests or for items that have already been renewed to library-specified renewal limits. Confirmation letters are generated with batch renewals.

Holds, Recalls, Loans and Pages Requests

Virtua processes four types of requests; hold, recall, loan, or page (HRLP). The request type can be manually assigned by the library staff or automatically determined by the system. The system's classification is based on a number of library-defined parameters, the item's location and status, and the patron type. Virtua gives your library the flexibility to use system-designated requests for certain user types and gives your staff the option of choosing the request when necessary. This built-in flexibility means that your library can determine which of the request types is available to different user types, which users may specify these requests and which users accept the system request. Patrons, if given the permission, may view their position in the queue for the item via the Pending category on their Activity Window. The library staff can view and manage the request queue for a bibliographic record or for a specific item. When items that are flagged for holds, recalls, and loans are returned, Virtua automatically generates letters to be sent to the items' next recipients.



Patron Record Information Screen displaying the Pending Tab of the Activity view which displays the items requested by the Patron and the patron's place in the queue.

Disputed Returns

Any item may be placed into a disputed category. This is done by highlighting the line item and then clicking the dispute button. The software automatically moves the item from its current category to the disputed category. This "disputed" status suspends all fine calculations and removes the item from threshold calculations for circulation blocks. However, the link between the patron and the item remains, allowing the situation to be resolved to the satisfaction of library policy. Fines attached to a disputed item are no longer added into a patron's total fines, but are reserved until the dispute is resolved. When the dispute is resolved, the fines are either waived or recalculated from the beginning of the fine period and then charged to the patron's record. A record of fines and/or charged items that have been waived can also be maintained for tracing purposes.

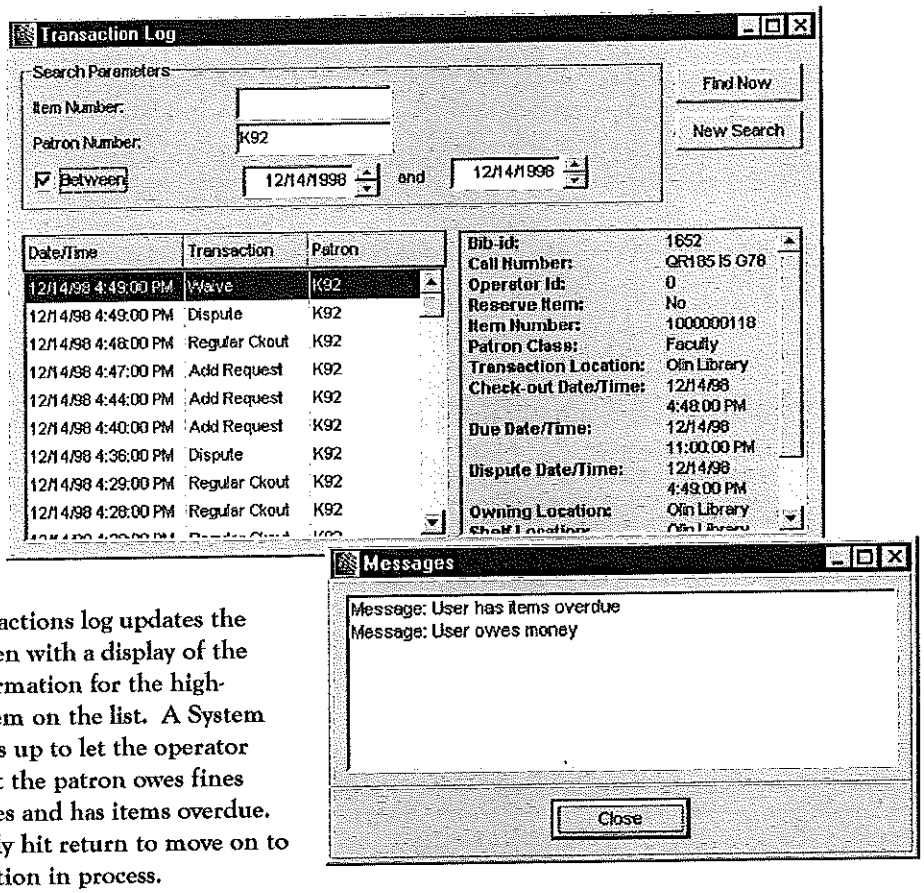
Grace/Amnesty Periods

Your library can specify a grace period for overdue items in the system parameters. The system configures the grace period using a patron + location matrix. Fines are not charged for items returned

during the grace period. Fines can be computed from the due date or from the end of the grace period according to your library's policies. Your library can also set an amnesty period allowing your users to return overdue books in a defined time-period without being fined.

Patron Information

Virtua maintains four levels of patron information. The card tab provides a card-like view of the patron registration record. The elements of the Card view are defined by the library. The MARC tab provides the full patron registration record in MARC format. The Activity tab shows all categories of activity, such as checked out, requested, pending, available and disputed. The Account tab shows all financial information relating to the patron. All information in the patron record is secure and only authorized staff and, if the library desires, the patron, have access to the information in the patron record. The library can also choose what tabs on the patron record are viewed by the patron.



The transactions log updates the right screen with a display of the item information for the high-lighted item on the list. A System Alert pops up to let the operator know that the patron owes fines and/or fees and has items overdue. You simply hit return to move on to the operation in process.

User Initiated/Self Service Transactions

Virtua supports user-initiated services. At the library's discretion, patrons can access their accounts with the use of a user name and password. They can see the items checked-out to them, view their position in the hold queue, cancel a hold request as well as see the financial records associated with their accounts. Patrons may also be given the privilege to renew an item or items, place a hold and update their address.

Patron Fines

Virtua keeps track of fines due on overdue items based on policies set by your library. For maximum flexibility, your library can set different fine rates based on the item, location and patron type. The system also allows fees for services such as photocopying to be added manually to a patron's record. Virtua will accept a full payment, partial payment, and the deletion of patron fines and fees. Fines may only be deleted or waived by an authorized individual. Virtua automatically blocks patrons from circulation privileges when their charges exceed a library-specified amount.

Transaction Log and Audit Trail

A right click from the Activity tab or the Account tab gives you access to the transaction log or audit trail respectively. The transaction log displays circulation statistics for a patron, for a patron plus an item, or for an item only. Your library determines the time period of the transaction history to display and to archive in the system. The audit trail displays statistics for the financial information related to a patron.

Again, your library chooses the time period of the financial history to display and to archive. Both the Transactions Log and Audit Trail are parameterized and can be turned off.

System Alerts and Blocks

Virtua utilizes visual and audible alerts, and blocks for delinquent patrons. Alerts inform the operator of account statutes such as a patron's existing fines, overdues and filled requests. Alerts do not block a patron's circulation privileges, but do require operator acknowledgment. Virtua also has system blocks that suspend circulation privileges when the library-defined thresholds are reached. System blocks are not easily removed. Circulation on the "Fly" Items that have not yet been barcoded can be checked out quickly and efficiently using Virtua. The process for adding items "on-the fly" is simple and can be accomplished by non-catalogers. The Circulation staff simply click the "circ-on-the-fly" line from the transaction menu in the circulation subsystem and the MARC Editor displays the "circ-on-the-fly" workform. This workform includes only those MARC fields that the library defines as necessary for these records. In fact, your library may choose to use the Labeled Editor that displays tag labels rather than just tag numbers. For instance, Author's Last Name, First Name, and Title, will appear in each field to make data insertion more intuitive for your staff. Librarians may also create validation rules to ensure that the "circ-on-the-fly" record contains a specified set of tags.

Circulation Control Reports

Virtua generates a series of four notices to handle overdue materials. Your library may send one review notice x number of days before the items are due. A specified number of notices regarding overdue items can be sent prior to a bill being issued containing the price of the book and a processing fee. An account statement can be sent to the patron if the item is not returned in the library-specified number of days. In addition, there are pre-overdue search lists your library can use to search the stacks for material before notices are sent to the patrons. Other notices available include, fine letters and request availability notices.

Circulation Backup

The circulation backup system lets you continue automated circulation at times when the main system is unavailable. Circulation backup has the same interface as the Virtua Client and allows you to checkout, checkin, renew, accept fine payments and create patron records. Later when the main system becomes available, you can upload the information recorded by the backup system to the serve and load the transaction data into the Virtua Database.

Reserve List

Virtua allows you to create and maintain course reserve lists and monitor the circulation of items associated with those lists. Users are able to search for reserve lists by course number and instructor name. Virtua gives the option for your library to archive a reserve list or reserve item once the active period has expired. This allows the library to quickly re-activate the list or item when the professor puts it on reserve again at a later date.

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OPAC

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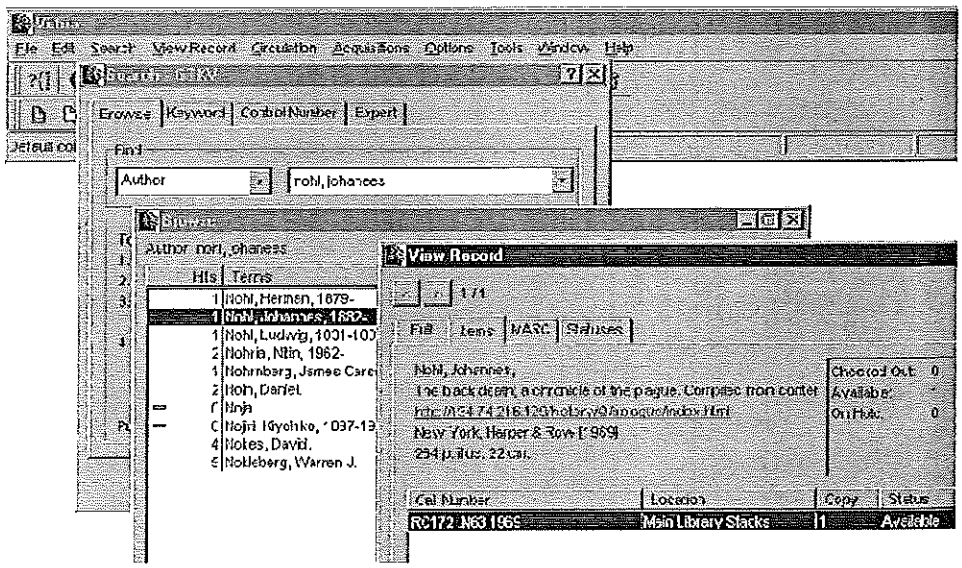
Easy Access

Virtua's Online Public Access Catalog (OPAC) provides the end-user with an efficient, easy, and quick way to access your library's catalog. The OPAC achieves this through powerful server functionality and its intuitive client interface. Features of the OPAC include:

- Library configurable interface
- Multiple search options
- Easy to read cross-references
- Multimedia access
- Patron Empowerment
- Sorting
- Access to library catalogs worldwide
- Inherent Unicode support
- Security

Multiple Search Options



Virtua offers four types of searches: Browse, Keyword, Control Number and Expert.
Virtua's Browse search option allows users to explore a list of indices chosen by your library. The Browse search produces an alphabetical list of the index chosen by user, and it allows the user to easily navigate through the list—next/previous page, skip "x" number of entries forward or backward in the list. Right truncation is implied, so even a misspelling will place the user in the alphabetical listing. The Keyword search option gives the users the power to incorporate, singly or in combination, the use of Boolean operators, left, right, and middle wildcard truncation. Control number searching is designed for staff use. It returns records based upon numbers such as ISSN, ISBN, OCLC, LCCN, Item ID, and Bib ID. Expert searches allow the user to construct search strings while incorporating the use of Boolean operators, left, right, and middle truncation, and proximity searching.

To further refine search results, users can employ the use of filters in Keyword and Expert searches. The user can filter on categories such as location, format, nature of contents, language, place of publication, and year of publication (date range). Virtua also offers users the convenience of printing, saving, or emailing records.

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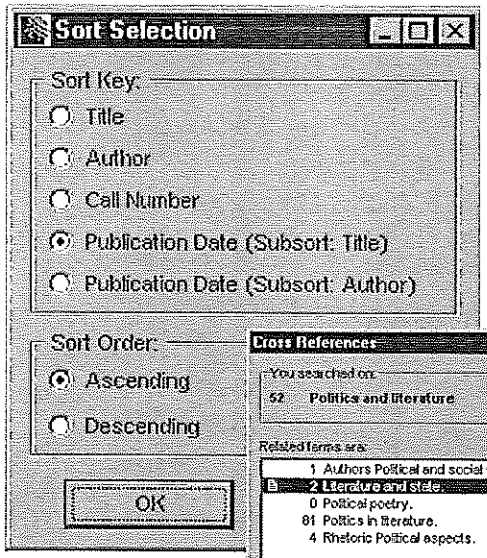
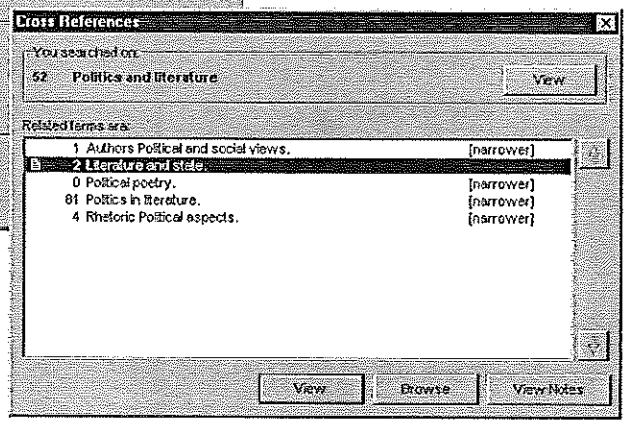
Easy to Read Cross References

Reading cross-references has never been as simple as it is with Virtua. Immediately, the user can identify "see" and "see also" references. Users can view referenced terms and authority records. Virtua also will tell the user whether the terms referenced are Broader, Narrower, Earlier, Later, Acronym, or Musical compositions.

Sort Selection Dialog Box





This Virtua OPAC Cross Reference Screen displays narrower headings related to the original subject search of "politics and literature".

Library Configurable Interface

Your library configures the interface! Through Virtua's permissions and parameters matrix, Virtua is able to offer your library many display options for the OPAC—bibliographic information displayed on the card screen, bibliographic information displayed on the List of Titles screen, tabs that are viewable by a particular patron type, plus many more!

Sorting

Virtua will sort by the default the library chooses, but will also allow the user to resort his search results. To sort result sets, users simply specify their sort option by clicking on the Sort button. Result sets can be sorted in ascending or descending order by author, title, call number, and publication date with a subsort of author or title.

Multimedia Access

Web pages, sound clips, and other external files are all accessible at the click of a button! Virtua opens up a whole new world of access with regards to multimedia. Multimedia is linked through the 856 tag of the MARC record and can be displayed with the appropriate viewer. A user can immediately access these objects regardless of their location or format, by simply clicking on a highlighted link that is located on the various tabs of the View Record screen of the bibliographic record.

Patron Empowerment

Virtua's patron empowerment features help free-up your staff's time while giving your users special privileges to:

- ✓ Place their own requests
- ✓ View the status of their requests
- ✓ View their place in the request queue
- ✓ View their own patron record
- ✓ View their current activity
- ✓ Review their financial (fines/fees) information
- ✓ Initiate document delivery and ILL requests
- ✓ Renew materials independently

Your library may also choose to use self-circulation workstations which enables patrons to check in and check out materials as permitted by your library.

Access to Catalogs Worldwide

Search your library's catalog and catalogs worldwide! Virtua's support of the Z39.50 (version 3) standard enables your users to search Z39.50 compliant library catalogs/databases such as IAC, SilverPlatter, UMI. Users access these library-defined databases from a pull-down list box that is constructed and configured by your library. By opening multiple sessions, users can search and compare result sets from various databases.

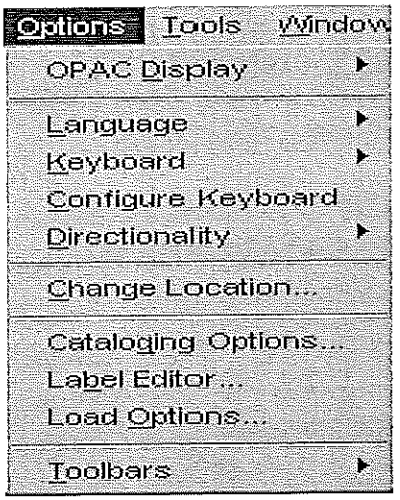
Multilingual Support

With Virtua's OPAC, your users can search, retrieve, and display records that contain data in over 100 different languages. Currently, Virtua's Unicode implementation can support all languages based on the legacy scripts of Latin 1, Latin 2, Cyrillic, Greek, Arabic, Hebrew, Turkish, Japanese, Traditional and Simplified Chinese, Vietnamese, and Korean.

In addition to Virtua's multilingual support for storage, display, and input, users can dynamically change the Virtua interface language, the system dialog and Virtua's help facilities without impacting anyone else in the system and without leaving his current session. So, now if your patron speaks German or Chinese, he simply changes the language display option (See Virtua's Unicode Fact Sheet for more details).

Security

Because security of your data and your system is important, Virtua employs a sophisticated security-permissions parameters matrix that allows and denies access to individual users. Each user can be given a user profile that defines a user's access, screen displays, and empowerment capabilities. Login Ids and passwords can be required and are used by the system to authenticate users' privileges within the system. These privileges can also be assigned to users within a group. The number of groups that can be established is unlimited.



The Options menu offers 10 options, six of which can directly affect your OPAC session: OPAC Display, Language, Keyboard, Configure Keyboard, Directionality, and Change Location.

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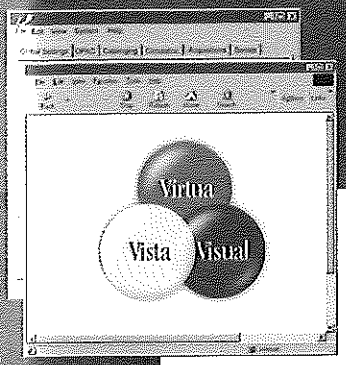


Serials Control

Workflow Sophistication and Simplicity

Virtua's GUI provides an intuitive, familiar work environment by using tabs, floating menus, and many additional access points which allow for quick travel through the database.

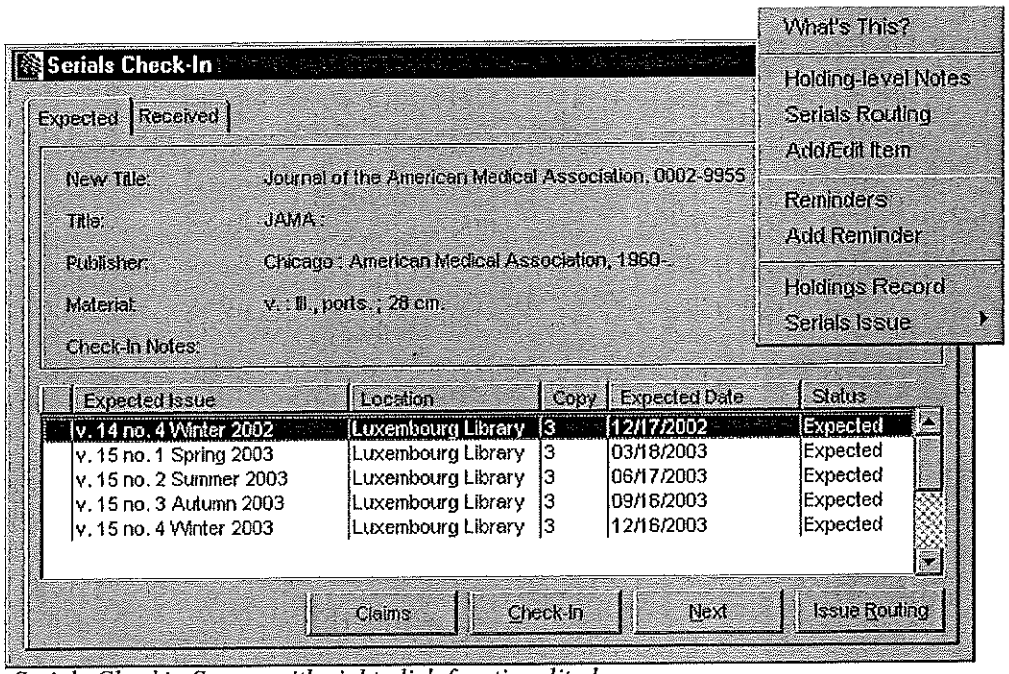
The serials librarian is able to enter the work process at any point using the client toolbar and can remain in a single procedure, while bringing up additional windows to perform other functions. For example, from the check-in screen, a serials librarian can immediately conduct an OPAC search and view prediction patterns, policy notes, the bibliographic record, and the holdings record for that serial.

The GUI allows you to execute one process from many different locations within the client. Claiming, for example, can take place from the purchase order screen or the serials check-in screen. Virtua allows checkin from the holdings record of an OPAC search. And, because Virtua incorporates the EDIFACT Standards for Electronic Data Transfer, you can immediately queue a claim for electronic transmission saving you valuable time. If your vendor prefers printed claim letters, Virtua will create them for you. You may also opt for both options, if you still need a paper copy for your files.

Right click functionality can be found throughout the Serials subsystem. For instance from the serials check-in screen, users can update holdings records, add or modify issues, view and manipulate serials routing lists and access many other features.

Subscription Management

One of the more complex serials control processes—the recording of serials publication patterns in the MARC holdings record—is made easy with Virtua's intuitive processes.



Serials Checkin Screen with right click functionality box.

From the simplest to the most irregular serial publication pattern, Virtua allows you to create and save patterns unique to the subscriptions your library receives. This coding and the creation of the holdings record can be completed at the point of order or when the first issue is received. Once a pattern has been entered, future issues are automatically predicted and you may copy this pattern to other subscriptions with the same cycle. In many systems, the modification of a pattern for special issues poses difficulties. In Virtua, you can modify alternative

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enumeration or chronology, add a special issue, modify a special issue or delete one or multiple issues. The prediction pattern screen also allows for the coding of omissions and combined issues. If a serial is a monthly publication except for two months of the year, for example, you can use the calendar to specifically designate the months that are exceptions.

Renewals, Reminds and Routing

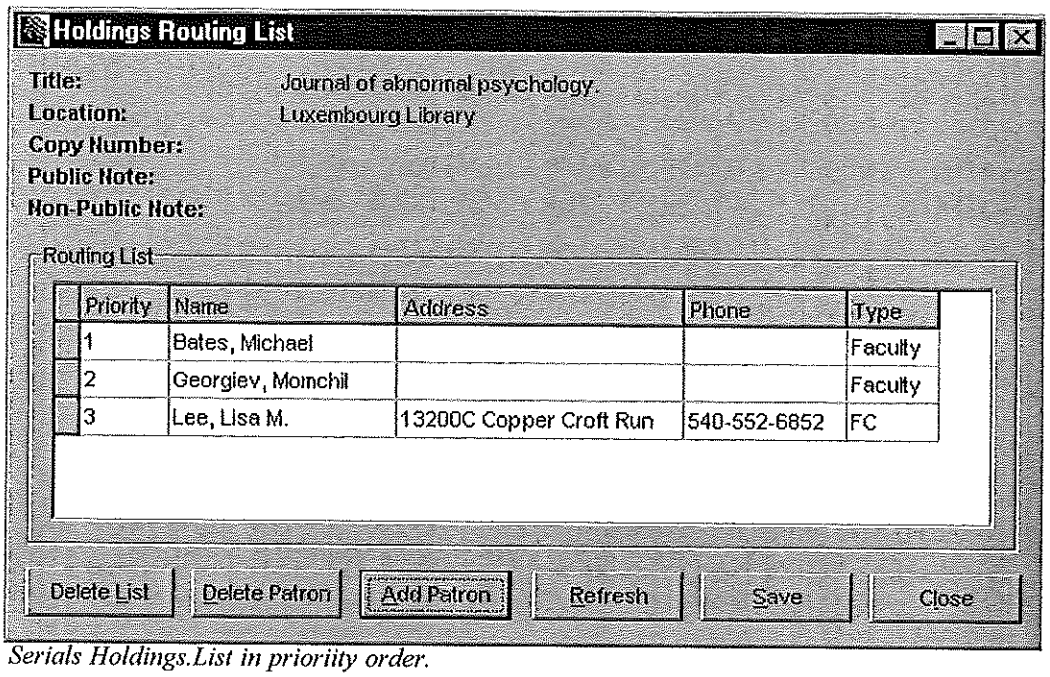
Because the workflows of Acquisitions and Serials often interact, Virtua seamlessly integrates the data flow between the two subsystems. This integration includes ordering, tracking, renewing, and paying for periodical and monographic (standing order) serials.

By simply selecting the order type of the line item as Subscription, Renewal of Subscription, or Membership, you can edit and save information on the Order Line Editor window about the subscription dates. These dates can be changed using an easy pop up calendar. By saving the beginning and ending dates with the order for a subscription, the system automatically creates a serials reminder and the renewal date will be used to determine when the subscription expires. Virtua creates reminders for overdue issues and automatically deletes them when the issues are checked-in. Reminders are automatically removed when the issue is claimed.

After check-in you may wish to route the subscription using the serials routing feature.This feature allows you to view the holdings routing list window where you can view, add or delete patron names or move patrons up and down in the routing priority list.

Bindery Features

The Virtua Bindery subsystem will be a feature of a future release of the system. Virtua's binding capabilities are being built into serials control with support of the Z39.76 standard. Binding is predicted automatically when a serial is checked in and is based on the frequency specified in the 853 tag and the locally-defined bindery tags. Virtua will also automatically notify you when the adequate number of issues for binding has been received. You can create vendor records for binders, as well as manage account information at the time of check-in of binding items based on information in the holdings MARC record. Full screen editing is available for the binder's notice with strict user permission to control editing.



Serials Holdings.List in prioriity order.

Advanced Functionality with Ease of Use

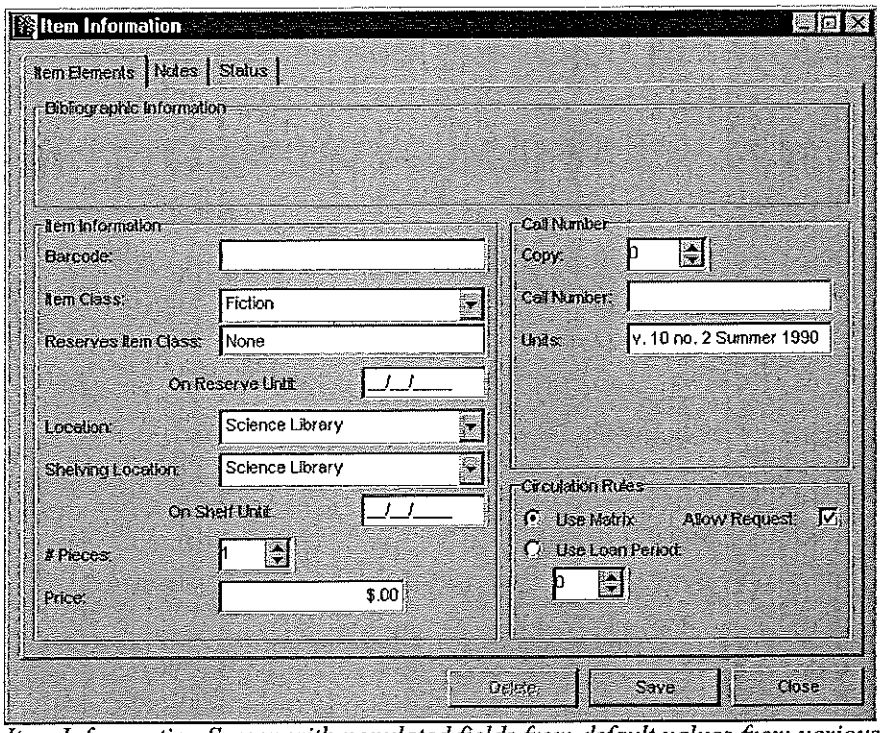
Also of importance is the level of functionality Virtua supports. While the serials control subsystem is sophisticated, it is simple to use because of the GUI and elegant workflow processes. Instead of fighting through complicated procedures, you can direct this subsystem to perform much of the work, giving you time for other activities. For instance, if your library has multiple subscriptions of a serial, but only circulates two of these subscriptions, your patrons can view from the View Holdings Record which items circulate.

Creating an item record is simplified also. Many of the fields in the item information screen are automatically populated from default values allowing you to simply fill in other fields such as the barcode information. Coming soon to Virtua is the automatic creation of an item record at check-in.

To track serials control activities, Virtua provides a comprehensive set of reports that inform you of the status of expected issues, subscriptions, acquisitions, and bindery activities.

Integration with Other Subsystems

The serials control system is tightly integrated with other Virtua functions, allowing quick movement between functions in different but related subsystems. This eliminates time-consuming efforts to find information in other areas of the database. This focus on intuitive cooperation between functions provides a seamless transition for the serials control librarian.



Item Inforrmation Screen with populated fields from default values from various records and parameters.

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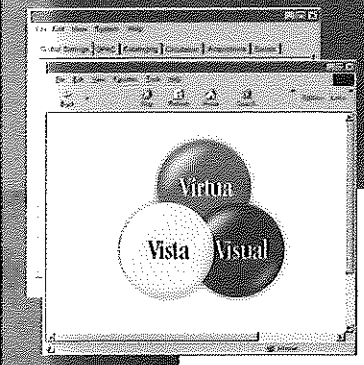

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Unicode™ and Virtua

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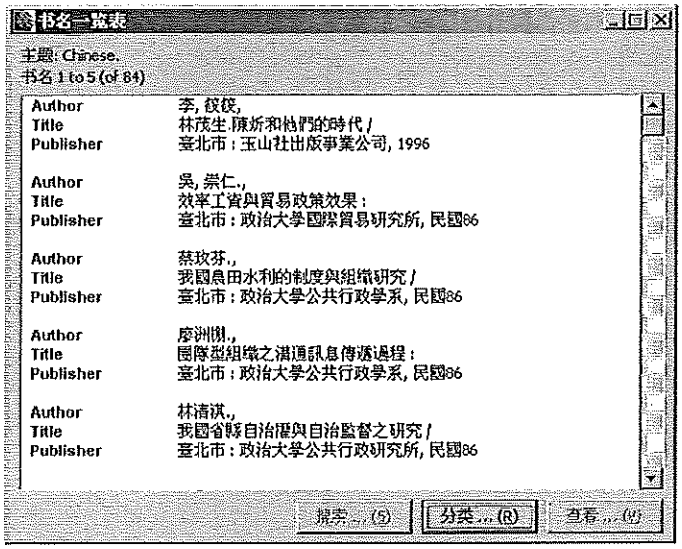
Unicode™ and Virtua

Virtua software is compliant with the Unicode™ Standard, Version 3.0. Unicode is a fixed-width, uniform encoding scheme for written characters and text. Virtua supports a subset of this international character code, which includes characters for the major scripts of the world.

The Unicode™ Standard is modeled on the ASCII character set, but uses a 16-bit encoding scheme to support full multilingual text. The Virtua database stores Unicode character values in a transformation format called UTF-8. UTF-8 allows the transmission of character data between systems that require 8-bit oriented protocols.

Benefits of Unicode™ in Virtua

VTLS Inc is the first vendor to provide an automated library solution that incorporates all functional aspects of the Unicode standard. Better yet, Virtua is the only system that supports Unicode™ in all its subsystems. Because Virtua was designed with multilingual support in mind, we incorporated Unicode as one of the most fundamental requirements for library systems that operate in a global environment. The most important aspect of the Virtua solution is that all data in all records is stored in the Unicode encoding scheme which makes Virtua the only native Unicode library system on the market today.



Virtua List of Titles displays the results from a Chinese search showing client labels in English and data in Chinese.

The fact that Virtua is based on Unicode makes it easy for you to add new languages and records to the catalog in any script that is supported by Unicode. Your staff and end users can search the catalog by dynamically switching to their preferred language. All records, for example bibliographic, authority, patron, order, and item records can be loaded and cataloged in the native script of the data. A virtual keyboard display facilitates direct data entry for all staff and end user functions. In fact, the entire Virtua client and Chameleon Web Gateway "speak" your preferred language so that all functions across all subsystems can be carried out in the selected language. Moreover, Virtua's Unicode support allows entry of any combination of characters at any point in the system, even combinations of scripts in a single field.

Client Implementation of Unicode™ Support in Virtua

Support for Unicode in Virtua allows libraries to provide access to data in any combination of languages. Full Unicode support is provided through the use of the Windows 2000 operating system. Windows 2000 provides Unicode fonts for display of a broad range of Unicode characters, keyboard definitions and virtual keyboards for entering characters not supported on the physical keyboard.

Libraries requiring support for multiple scripts will enjoy the flexibility of being able to enter and retrieve data in any script from any client PC running Windows 2000. For many libraries, Windows 95/98 will be sufficient for supporting multiple languages using the characters supported on the code page of the local version of Windows (e.g. English, German, French and Spanish). In addition, all languages

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except right to left bi-directional languages such as Arabic and Hebrew are supported within the NT environment.

The Virtua client also operates within Windows 95 and 98 for those customers who wish to support the localized Windows version and English. This means that Virtua will continue to support, for example, implementations in localized Chinese Windows 95/98/NT plus English, Arabic Win95/98/NT plus English and Hebrew Win95/98/NT plus English.

Flexibility to Move from One Language to Another in all Subsystems

The most notable and sophisticated feature in Virtua's Unicode support is its ability to dynamically change from one language to another in all subsystems. For example, Virtua supports direct input, indexing, and display of characters in Unicode from a single, standard workstation. In this way, users can dynamically change the interface language and search language without affecting other system users. A cataloger can be cataloging an English record, but then need to add a tag in Traditional Chinese. The cataloger simply changes the display and input of the Virtua client to Traditional Chinese and enters the tag in the record. Multilingual or foreign language titles may also be ordered through the Acquisitions subsystem.

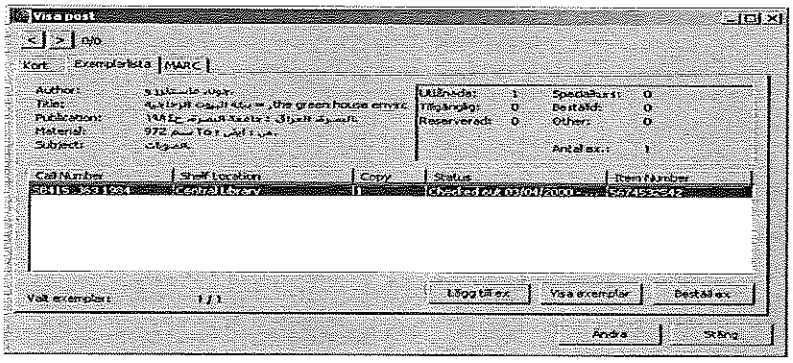
Virtua Translator

Converting imported records is another feature of the Virtua implementation of Unicode. The Virtua Translator converts records not already encoded in Unicode to the Unicode character set. This can be done interactively or in batch mode via a load program. The Unicode implementation also allows for importing and exporting records in the full ALA character set.

The Virtua Language Editor

The Language Editor is a tool no library wishing to support multiple languages can do without. This nifty tool supports the language conversion for the languages the library chooses to support in the Virtua client. Your library staff can change the language of the tabs and buttons, the titles of windows, and the messages and prompts. The editor is also used to convert help text on the search windows in the OPAC. Customers may choose to purchase the Language Editor to add other languages not currently offered, or to change the names of screens and to customize the help files to suit their needs.

To summarize, Virtua is unique in both its ability to support multiple languages within one user interface (with dynamic language selection), and in its ability to support all scripts defined in Unicode for storage, and all scripts supported in Windows 2000 for entry and display.



Virtua Item screen with client labels in Swedish, data in Arabic and item level information reported in English.

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General Overview and Benefits of RFID Technology in the Library

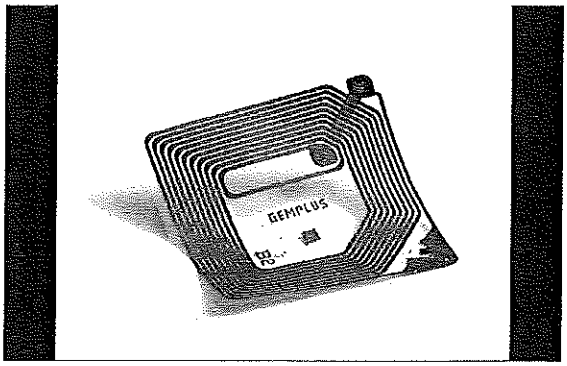
Overview of RFID Solution

The radio frequency identification (RFID) solution offered by VTLS Inc. and Gemplus is based on Gemplus' smart labels. The solutions have an open architecture allowing them to be plugged into most library automation systems. Because of this open architecture any library regardless of their current automation system can implement the VTLS/Gemplus systems.

What is Radio Frequency Identification?

Radio frequency identification (RFID) systems are rapidly replacing competing technologies in many applications. A basic RFID system consists of three components:

1. An antenna or coil
2. A reader
3. An RFID tag or smart label that is electronically programmed with unique information.



Gemplus Smart Label

A basic RFID system uses smart labels, placed in books, and various antennas to identify and manage your library's collection. The smart label in the book can be read and written to without contact or line of site. You simply install the smart labels in your collection and fast, accurate identification of your materials will be handled by your current library automation system. Specific smart label reading/writing stations using a smart antenna are implemented at various key administrative process points within your library. These include:

1. Patron self-checkout borrowing stations
2. Tagging and Verification Stations
3. Theft Deterrent Gates
4. Self-ReturnBook Drops
5. Sorting Stations
6. Inventory and Shelf Management Systems

Advantages of RFID over Barcode Systems

RFID applications enhance productivity and efficiency in libraries worldwide. Significant advantages of an RFID system include:

1. The non-contact, non-line-of-sight nature of the technology. Labels can be read through a variety of substances and do not have to be oriented in any particular direction. This results in less handling and faster processing.
2. More than one RFID tag can be read at one time. Therefore, it is possible to scan multiple volumes simultaneously when checking in or taking inventory.
3. RFID has become indispensable for a wide range of automated data collection, identification and management applications that would not be possible otherwise. For your

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library this means using one technology source for the identification and management of your collection, as well as for theft deterrence.

4. The read/write capability of an RFID system provides the ability to edit data, essential to interactive applications.

Benefits of the VTLS Inc./Gemplus Solution

1. Two years of research within the context of a library.
2. Utilizes a single technology for circulation management and theft deterrence.
3. Significant research and development investment has been made and continues to be made to incorporate new applications for RFID technology in the library. Most recently these include tag design and shelf management systems.
4. The investment in tags is by far the most significant cost of an RFID library management solution. VTLS Inc. offers the best capability to meet the required budget due to the extensive label manufacturing capacities of Gemplus.

Road Map to Implementing RFID Technology Solutions in Your Library

1. Prepare building for installation of Self-Return Book Drop.
2. Installation of Self-Return Book Drop.
3. Installation of Security Gates.
4. Installation of RFID antennas at circulation desk(s).
5. Setup of technical services area for implementation of RFID.
6. Acquire smart labels and affix them to books.
7. Program tags at technical services area.
8. Installation of VTLS Self-Checkout workstation. Ensure your automation system is SIP 1 or 2 compliant.
9. Train library staff.

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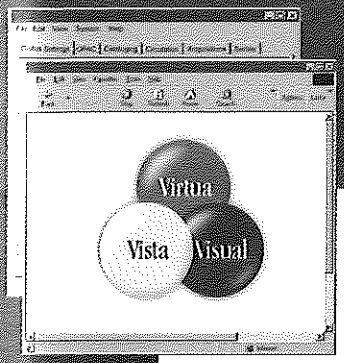

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Collection Management Through RFID Technology

Virtua Integrated Library System

Vista Companion Product Suite

Visual Multimedia & Imaging Solutions

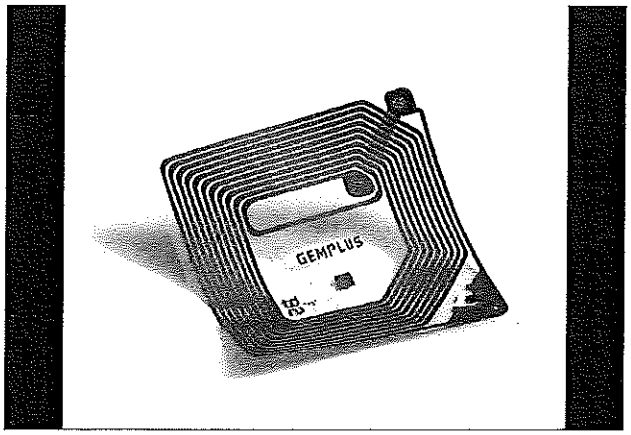
Administrative Tasks Made Easy with RFID Technology in Your Library

As your library's collection grows, you may find that controlling it has become more and more cumbersome. Through the use of RFID technology (see General Overview and Benefits of RFID Technology data sheet) your library can now handle multiple administrative activities that will give your staff more time to develop other services for your patrons. The following explains the administrative applications of RFID technology and how they can help you:

1. Tag, identify and verify your collection.
2. Manage the books on the shelf.
3. Keep an accurate inventory of your collection.
4. Deter theft of your collection.

VTLS Tagging and Verification Station

Entering the data on the smart label is made easy with the tagging and verification station. Paper-thin Gemplus smart labels are placed into new books at this station usually located in the library's technical services area. If there is an existing barcode label, it is scanned and the item number is then written onto the smart label. Alternatively, data can be keyed in from a keyboard connected to the tagging station.



Gemplus Smart Label

VTLS Shelf Management and Inventory Control

Identifying books on shelves has long been a challenge for libraries. In most instances, it is something that has proved to take too much staff time and has been technically not possible or produced unreliable results.

The Library Shelf Management Reader has been designed specifically to make this task easy. Paper thin labels previously secured in books can be read within seconds and stored in the reader's flash memory that has a capacity of either 64,000 or 32,000 books depending upon the label configuration. The reader has a battery charge life of four hours of continual use between charges making it easy and convenient to carry. The reader's arm, which contains an antenna, is extendable, and an adjustable strap allows the reader to be hung over the user's shoulder. An LED and an audible alarm provide feedback to indicate successful reads or other application specific requirements. In addition, a brush is attached to the surface of the antenna to protect books, and to increase efficiency of the operation.

The shelf management reader supports location of mis-shelved books, detection of missing books and

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the search for specific books. The reader updates the central database via an RS232 serial link to an administrative workstation.

Benefits of the VTLS/Gemplus Shelf Management Reader

1. Allows for more accurate inventory control of your collection.
2. Can scan and read multiple books or single books on a shelf (including metal shelves).
3. Identifies lost books and therefore improves service levels to customers.
4. Increases staff productivity, freeing them to focus on customer service activities.
5. Shelf scans can be taken quickly reducing the time it takes for inventory control and the identification of misplaced books.

Theft Deterrent System

The Theft Deterrent System is designed to maximize library security, using integrated RFID and EAS (Electronic Article Surveillance) technology. The EAS systems are used to protect your library's collections from theft. Here's how they work.

Installation and Operation of Theft Deterrent Gates

In the past, theft deterrence has been implemented through single bit magnetic and electromagnetic tags. The new generations of C220 Gemplus Smart Labels have the EAS capability built into the smart label itself.

Gemplus Theft Deterrent Gates are secured to the floor at each entry and exit point in the library. Smart labels attached to books are detected between the gates from six inches (150mm) above the floor, to 6.6 feet (2 meters) high. It is recommended that the gates be positioned 36 inches (900mm) apart.

At the time a book is checked out through either regular circulation methods or through the patron-self checkout station, the smart label's theft system is deactivated. If this process does not occur, an alarm will sound and the gate's lights will flash as the patron passes through with the book.

The Theft Deterrent system is an integral feature of the chip within the smart label. It is a stand-alone technology that operates independently of the library database. This means the alarm will sound the instant a book not checked out properly passes through the gates, as there is no delay to reference the database.

Benefits of VTLS/Gemplus Theft Deterrent Solution

1. Only one technology is required for both inventory and theft management of your library's collection.
2. Library staff is alerted immediately when books that are not checked out pass through the Theft Deterrent Gates.
3. Would-be thieves are deterred by the physical presence of Theft Deterrent Gates.

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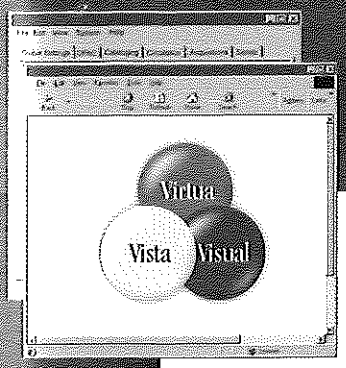

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Patron-Empowerment for Your Library Through RFID Technology

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Overview of Applications

Radio Frequency Identification (RFID) technology is rapidly being implemented to help libraries meet patron self-service demands. The VTLS/Gemplus RFID system uses Gemplus smart labels and a VTLS RFID interface to tag, identify and manage your collections. Administrative applications as described in the Collection Management Through the use of RFID Technology data sheet include the tagging, identifying and verifying of your collection, the management of the books on the shelf, inventory control and theft deterrence.

Patron Empowerment features of the VTLS/ Gemplus RFID system include:

1. Self-checkout stations for patron self-checkouts of items.
2. Self-Return Book Drops for external returns of books.
3. System identification of reserve items being returned.
4. Sorting and verification station allowing for faster re-shelving of items.

VTLS Self-Checkout Station

The VTLS Self-Checkout Station allows patrons to borrow books without assistance from your staff and as a result greatly speeds up the checkout process within your library. The Self-Checkout Station works with all automation systems that comply with the SIP 1 or 2 protocol.

Self-Checkout Workflow

Self-service technology is familiar and indeed preferred by more and more library patrons. The VTLS Self-Checkout Station applies self-service technology to the book borrowing function.

Patrons identify themselves using a card that can be based on magnetic, smart card or barcode technology. Libraries may also implement the option of a PIN (personal identification number) which can be entered manually.

After identifying their self, the patron simply follows the prompts on the screen and makes appropriate responses using the touch screen.

A book is placed on a library-identified area in front of the self-checkout station. The book's smart label is read by a smart reader and antenna that has been mounted underneath the tabletop. After the book is placed, the reader scans its smart label, your library's database is updated in real time associating the item with the patron, and the integrated theft deterrent system, incorporated in the smart label, is deactivated. A receipt is printed and issued to the patron confirming the borrowing transaction details.

The Self-Checkout Station is available as a complete system.

Benefits of the VTLS Inc./Gemplus Self-Checkout Station

1. No line of sight is required to read the smart label so there is no need for books to be opened or vertically aligned so that they can be identified.
2. Improves patron service by reducing long lines, allowing librarians to help patrons who wish to know more about library services such as interlibrary loan.

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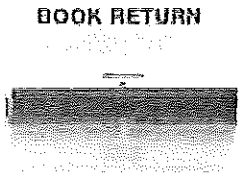
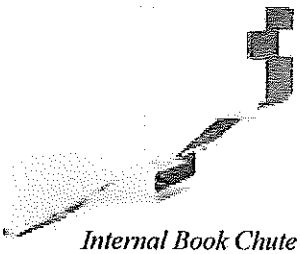
3. Updates the library's database in real time associating the item with the patron and showing the new status within the OPAC.
4. Allows staff to develop existing services and new ones giving the library an opportunity to reach out to its respective community by offering services such as more story hours and quicker reference help.
5. Improves library staff productivity by reducing the mundane tasks of checking out items, possibly improving morale.



Outside Book Return

VTLS Inc. Sel –Return Book Drop

The VTLS Self-Return Book Drop allows loans to be cancelled instantly as patrons deposit books through an external book return chute. This enhances a patron's trip to the library since their record is updated in real time allowing them to checkout new books right away.


Internal Book Chute

The VTLS RFID interface also updates the database and alerts the library when reserve items are returned giving prompter service to the individual requesting the item.

The Self-Return Book Drop is safe. Each book drop is designed with nine stainless steel deflectors that prevent liquids, matches and cigarettes from reaching the books. A free turning ball bearing steel roller at the end helps prevent items from jamming and eases books into an optional receiving cart. These safety precautions allow only books or magazines to proceed past the reader and the antenna to the book cart.

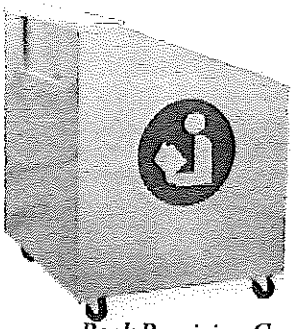
Packaged in a heavy-duty stainless steel fire deterrent chute, the book drop is ready to be installed in a library-specified location, facing an outside wall. The chute door opening is 15" x 4" and passes through an outside wall. A glass installation with a ten-inch wall kit is also available.

The VTLS Self-Return Book Drop is coupled with a Gemplus smart reader and antenna. The reader and antenna have the ability to read up to six smart labels simultaneously. However, library patrons should be encouraged to return books one at a time to ensure each one is read successfully. Books can pass through the chute at any speed and orientation to achieve a 100% successful read rate of all functional tags.

Verification and Sorting Station

The VTLS Verification and Sorting Station allows your library to get your collection to their appropriate shelves faster and ensures that all items have been checked in through the self-return book drop.

Workflow of Verification and Sorting Station


Book Receiving Cart

An entry-level clerk can do the manual verification and sorting of books. As books are pulled from the book recieving cart, clerks place them over the verification and sorting station. The Verification System simultaneously checks the library's database to affirm the item status is available and reactivates the theft deterrent information on the smart label. In addition, the screen displays the status of the book and the appropriate sorting bin. The clerk simply drops the item in that bin for re-shelving. If the item is

on reserve the clerk is notified and the book can then be immediately delivered to the circulation desk.

The automated sorting station is a highly customized option that automates the sorting process by running the books from the Self-Return Book Drop down a conveyor, through a pass that reads the smart label and then sorts the item according to a pre-defined category into that category's bin.

Benefits of the VTLS Self-Return Book Drop, Verification and Sorting Stations

1. Skilled staff can allocate more time to customer service as they are now freed from checking in books.
2. Patrons can borrow books immediately after returning their previous loans as the library database is updated in real time when books are deposited in the book drop.
3. Items on reserve are trapped and a message is displayed to the staff alerting them that the item is on reserve.
4. Items can be sorted based on a pre-defined category system such as Children's Literature or Best Sellers, or any category the library chooses allowing for faster shelving.

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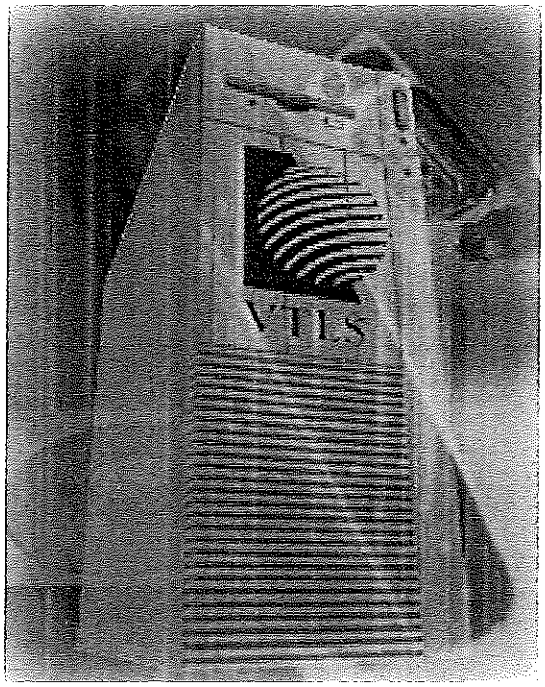
Collection Hosting Services

Don't let space constraints, budgetary restrictions and limited computer resources deter your organization from digitizing its image collection. VTLS System Hosting services are available for those organizations looking for a digital image solution without the up-front capital investment and support requirements associated with locally-installed systems.

VTLS provides the software, hardware and services required to maintain, store and display your image collections. Our highly trained staff will perform all required database maintenance, system backups and server administration. Additional system services like record loading, image linking and configuration changes are also available from VTLS.



Accessing your database is as simple as a telnet or web connection. Staff access to the database takes place using a telnet connection from our staff client software. Public access to the material is made possible through our full featured Web Gateway software products. Users can search your collection anywhere in the world, 24 hours a day using a web browser such as Netscape Navigator® or Microsoft® Internet Explorer. Additionally, sites electing to use the Chameleon Gateway implementation can configure the appearance of the user interface, presenting an image that is unique to your organization or collection.

Connecting to your remote database eliminates the need for a sophisticated server at your site. VTLS assumes the tasks of system maintenance, updating, troubleshooting and password administration. Because VTLS has invested in all hardware, telecom bandwidth, and facilities, almost all of the time-and resource-consuming administration tasks associated with running a VTLS image database system on a local network are eliminated.

VTLS system operators are experts at maintaining your database and assuring that access is not interrupted and the integrity of your system is not compromised. VTLS operates high-end, scalable servers, maintaining highly reliable telecommunications channels and redundant data storage systems. Our systems data technicians constantly monitor network traffic to ensure optimum performance.

VTLS supports virtually any number of simultaneous users and effortlessly handles the mission-critical needs of a single site, a multi-site institution, a multi-institution consortium, or a worldwide network. Each site on the network retains complete control of available databases and system administration options. As your site gains in exposure and starts to grow, VTLS accommodates the additional requirements with a minimum of configuration effort.

Contact a VTLS sales representative today to find out more about this attractive service. Let our qualified staff devise a system hosting solution that meets your organizations unique needs and requirements.

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Data Entry Services

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One of the most daunting tasks that information organizations can face is the data entry of printed material into an electronic form. A major data entry or retrospective conversion project can be costly, time consuming, problematic and difficult to manage. The amount of equipment required and the staff resources that are often pulled from other duties may make this type of project prohibitive to engage in.

VTLS Imaging has the resources, technology and staff to take on your data entry projects and provide a cost effective and timely solution for your electronic information needs. VTLS has over 25 years experience in library automation and incorporates that knowledge to develop creative solutions for unique and challenging library oriented data entry projects. We specialize in electronic conversion of library catalog cards, archival finding aides, special collection metadata and original cataloging of multimedia material. Our software allows import/export of converted records into a variety of formats including; MARC, Dublin Core and HTML. The final delivery of the data can be made on several media types including; DAT tapes, CD-ROM and via electronic transfer.

Every project begins with an analysis of the material and consulting with the organization to determine output specifications, data mapping details and custom fields for the data entry software interface. Throughout each stage of production all work is tracked and accounted for. Jobs are logged in with careful notation of detail and then checked against customer specifications to verify that the project is being accurately completed.

Project specifications are incorporated into the interface by experienced programmers and all fields are systematically analyzed assuring data validity and integrity. Among other variables, our staff checks: field length, data type, mandatory fields, sequential numbering and where applicable, associated image linking. Standard spell checking can be employed and, when necessary, a customized data dictionary is created.

To ensure high quality of the final data, work is entered and independently verified. The verification process involves data being keyed and then processed by a quality control operator to check database wide for errors.

All data is backed up daily, kept until completion of the loading or longer if needed, and stored in a secure location on-site under management control. Source material is kept in a locked vault when not being used and is promptly returned when work is completed. Special material handling arrangements can be made with VTLS if required.

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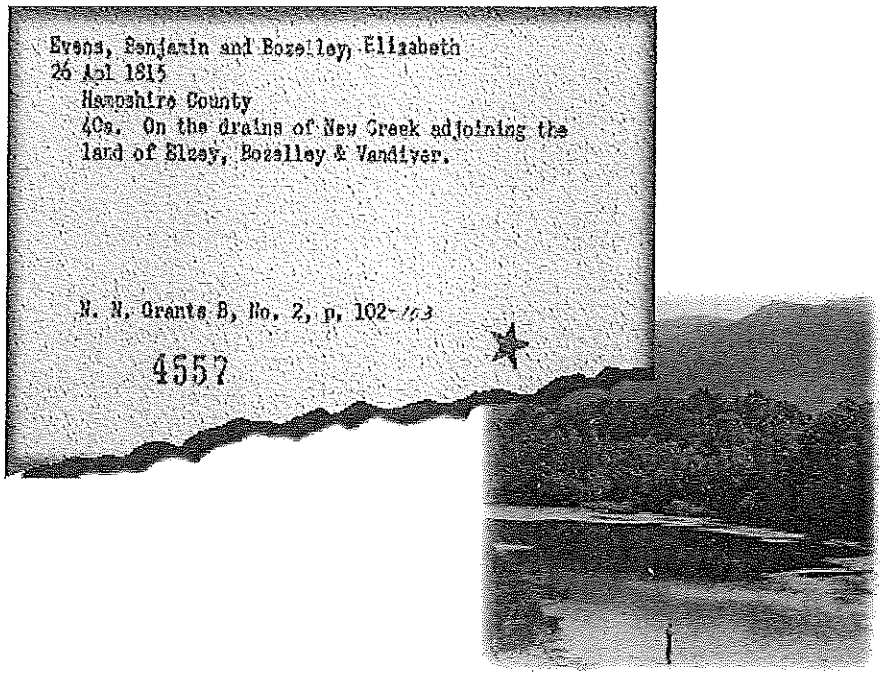
Dealing With Cards

Are space constraints in your library forcing the early retirement of the heavily used paper based card catalog? Paper card indexes can be difficult to maintain, deteriorating in quality from handling and often occupying valuable floor space. The question is, what do you do if the information on those cards is still of value and the library would like it preserved and made accessible?



VTLS Electronic Card Index

The VTLS Electronic Card Index eliminates these common problems while providing Web-based access to the collection at a fraction of the cost of traditional retrospective conversion/data entry services. High speed scanning technology is used to create "card images" which are automatically linked to a browse index. The Electronic Card Index can also be linked to other digitized material such as microfilm, photographs and maps to broaden the scope of your digital collection. In most cases, the card images can be converted to text allowing full keyword searching capability. Once the images are converted to text they can be mapped to a variety of formats including MARC.

Advantages of a Digital Card Catalog

* *Multi-layered Quality Control process to ensure the best image and accurate linking. Point-of-scan quality review and down-the-line sampling.*

* *Easy to use Web-based card browser allowing quick navigation through the index (forward, backward and incremental).*

* *Ability to efficiently manage large numbers of images, optimizing retrieval performance while minimizing disk space requirements.*

* *On-site production is available so valuable material never has to leave the library.*

* *Image retrieval option for linking to other digitized material and integration with the library system.*

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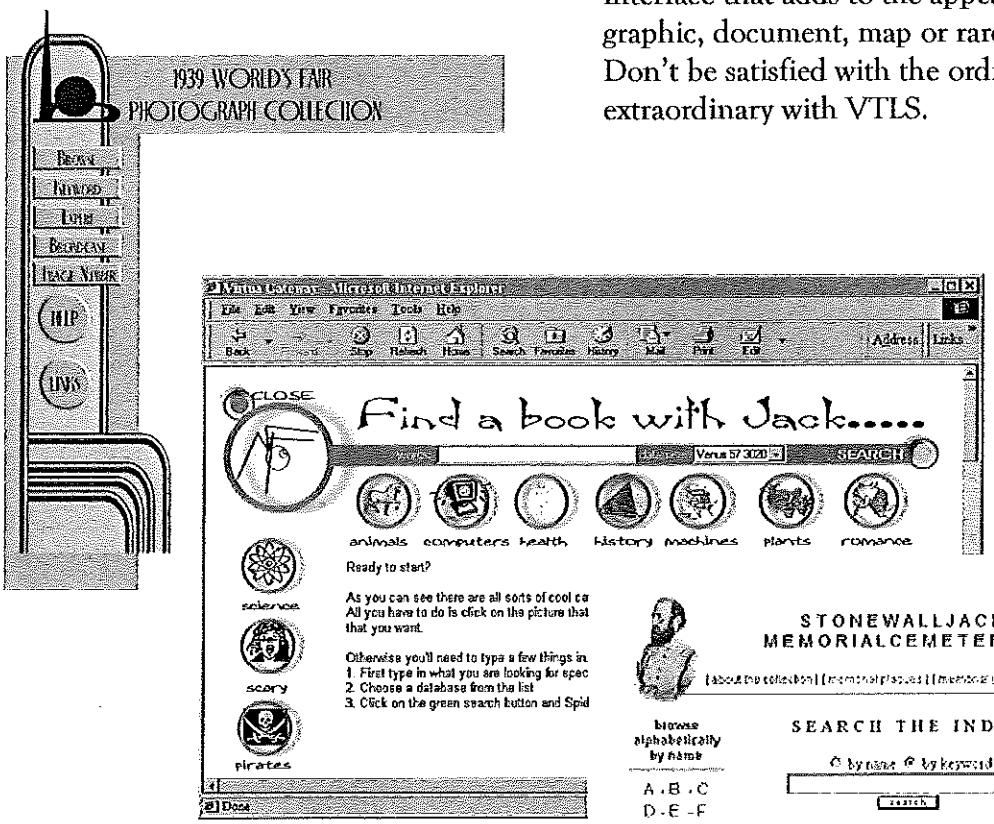
Design Services

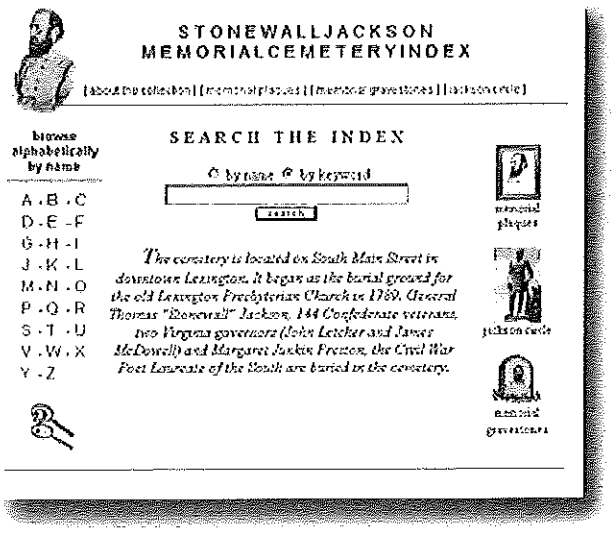
Looks count! The days of offering a terminal interface for public access to online catalogs are long gone. The Internet explosion has opened up electronic information to the masses and the masses are demanding that information be presented to them in an aesthetic manner.

VTLS Imaging can help your organization meet these aesthetic needs with public access interface development, custom web page design for special collections and display theme creation for use with the VTLS Chameleon Gateway.

Bring us your specifications and we will design you an interface to meet your needs. Our talented designers can create effective communication pieces from concept to completion.

Tell us about your design goals and our staff will create a special interface for your online collection. VTLS is happy to consult with your organization to identify an image concept and produce a creative interface that adds to the appeal of your photographic, document, map or rare book collection. Don't be satisfied with the ordinary, strive for the extraordinary with VTLS.





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Hi-Res Image Navigator

Libraries and other organizations are often faced with a difficult dilemma when it comes to displaying high resolution imagery on the Internet. Collections encompassing large format photography, maps, detailed artwork, architectural sketches and engineering drawings are often underutilized. The problem resides in the large bandwidth, memory and processing power required to retrieve this much data from the web. Disk space on home and office computers has become cheaper but the telecommunications limitations and speed deficiencies are still a roadblock for your patrons.

The VTLS Hi-Res Image Navigator is our solution to retrieval and display problems of these unique images. VTLS has developed a custom high-resolution image viewing interface utilizing Mr. SID compression software developed by LizardTech Inc. The software allows for rapid retrieval of large or highly detailed images in a web-based environment with no visual loss in quality. Images are scanned and compressed using a special encoding process, producing an image that can be loaded quickly into a standard web browser. The actual compression ratio achieved varies depending on image content and color depth but in general sites can expect around 20:1 for grayscale and 50:1 for full-color images.

VTLS has designed the Hi-Res Image Navigator with a clear and easy to understand interface. No formal instruction is necessary for users to begin immediately using the software to retrieve and display images from your site. Users are able to zoom in on any portion of the original image or select the region they would like to view via a focus thumbnail. The Hi-Res Image Navigator interface also allows for the viewer to select a desired screen resolution and window size to match the capabilities of their monitor. An additional feature of the interface is four directional panning which allows for viewing separate parts of the image without having to adjust the resolution or window size. All of this is possible with an ordinary web browser, no additional software needs to be downloaded for users to take advantage of this exciting functionality.

Contact VTLS Imaging today and let us scan your collection and produce a complete online solution for your collection of high-resolution imagery.

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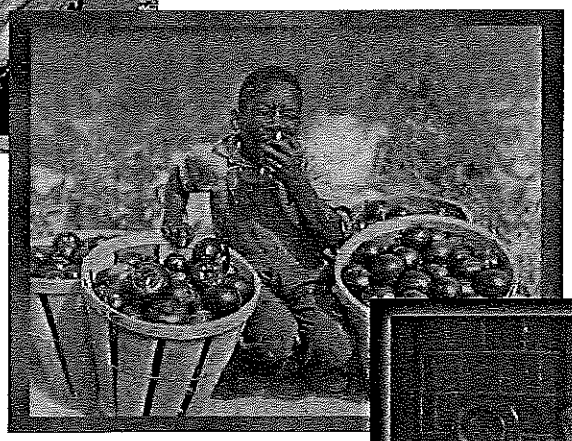
Managing Photographs

The old adage goes, 'A picture is worth a thousand words' ... however that expression cannot be said of a picture which is never seen. If the physical limitations of your facility are limiting the full potential of your photo collections, now is the time to break down those boundaries and bring your images into new world of digital imaging where cutting edge methods of storage and distribution can open your photographic collections up to the world.

Archiving



Indexing

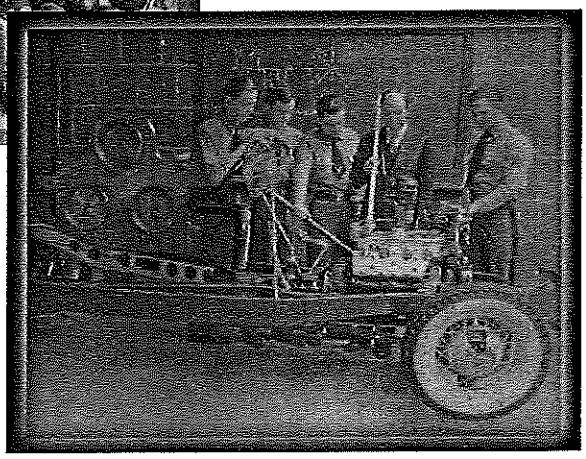
VTLS Inc.'s Imaging Department provides a comprehensive range of products and services for photographic collections, ranging from piecemeal scanning to complete turnkey digital imaging solutions. Our imaging experts have extensive experience in photo scanning and manipulation from a variety of media formats including: original photographs, 35mm slides, 4x5 transparencies and rare glass plate negatives. If the material is too fragile to be scanned, VTLS technicians can utilize our state-of-the-art digital camera and shoot a special copy of each valuable photograph.

Once the materials have been scanned and verified for accuracy, the files are compressed and stored in a variety of media formats including: optical disk, CD-ROM, Photo-CD, DAT tape or on an external server.

VTLS provides a wide variety of display and indexing options for your digitized collections. Our imaging department will work closely with you to develop helpful finding aides, MARC format based catalogs and other electronic tools necessary to organize and classify your photographs.

Preservation

World Wide Access



In order to showcase your images, our staff can create custom made interfaces for the World Wide Web, searchable CD-ROM databases and special products like the Virtual History Book, created for the people of Tazewell County, Virginia.

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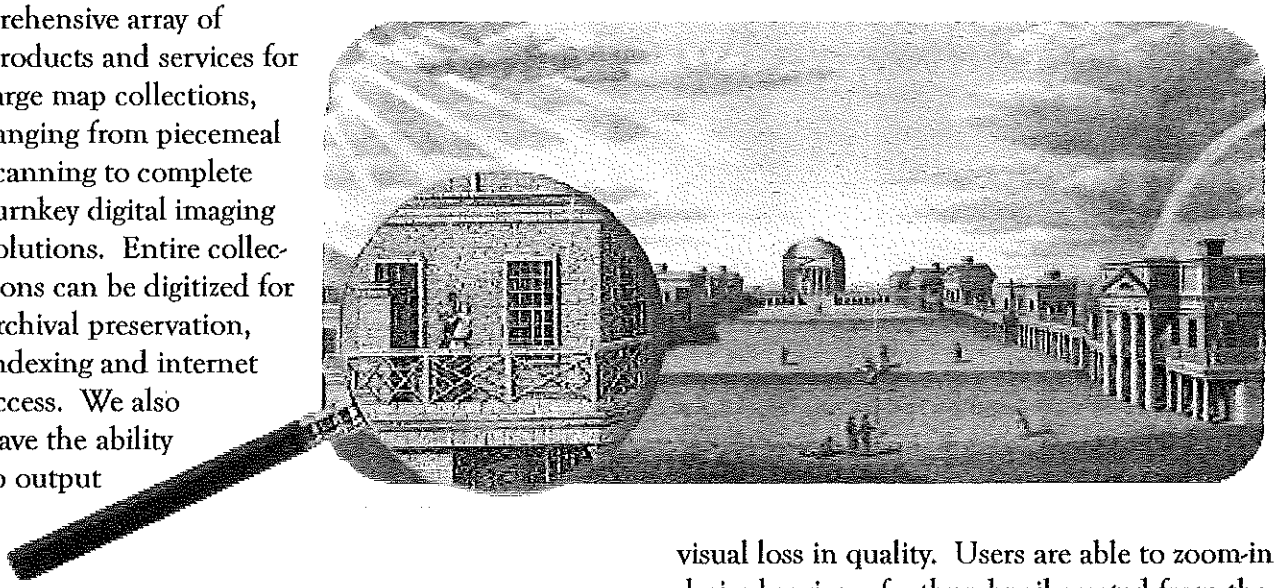
Mastering Maps

Need a map to navigate your map room? Is your organization faced with the difficult choices that come with an aging collection? Want to make your materials available to more people but are concerned about the risk of damage? Let VTLS be your guide for a trip into the new world of digital imaging where these any many more tough questions get answered.

VTLS, Inc.'s Imaging Department provides a comprehensive array of products and services for large map collections, ranging from piecemeal scanning to complete turnkey digital imaging solutions. Entire collections can be digitized for archival preservation, indexing and internet access. We also have the ability to output digital images on popular media including; DAT tape, CD-ROM and PhotoCD.



Why Digitize Maps?

* Allows your library or organization to provide high-quality archived digital images of aging or damaged materials
* Provides global access to your digitized collection ... and with the internet, this can be done 24 hours a day, 7 days a week
* Gives your users the opportunity to view the images without handling the original maps or documents
* Helps to organize your special collections that have become unmanageable due to their size
* Saves the end user valuable time because files can be viewed quickly and efficiently with a finding aid that VTLS can create for the collection
* Creates a copy of your collection to safeguard against damage to originals

VTLS, Inc. has developed a custom map viewing interface utilizing Mr. SID compression software developed by LizardTech, Inc. Mr. SID allows for rapid retrieval of files in excess of 200MB with no visual loss in quality. Users are able to zoom-in on a desired region of a thumbnail created from the original image. The interface also allows for the viewer to select a desired resolution as well as window size for viewing the chosen region of the map.

Magnify the Impact of Your Collections!

These features allow users to adjust the interface to the quality of their own monitors. Four directional panning is also available to allow viewing of separate parts of the map without adjusting the resolution or window size. All of this is possible with an ordinary web browser ... no additional software needs to be downloaded for viewers to take advantage of this exciting functionality. Imagine the renewed interest in your map collection this tool can facilitate!

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MetaCat

Metadata formats like MARC, Dublin Core and HTML are highly complex and often challenging to work with. Why should your cataloging software be just as complicated and difficult to use?

VTLS developed MetaCat to provide your staff with a highly configurable, easy to use web based cataloging utility for capturing image metadata. MetaCat uses configurable entry templates designed to make cataloging a simple and straight forward process. Data is entered in the interface using normal language, choosing elements from list boxes and selecting repetitive information from pull down menus. By removing the need to enter tags and subfields from the data entry workflow, MetaCat allows operators to key in data much faster. This saves considerable time and eliminates the cataloging errors that often creep into records. The data tagging is automatically done in the background based on rules files and constraints that your organization sets for the system.

MetaCat allows for identification of data elements and entry points, fully configurable rules for data entry verification and complete data mapping from template elements to MARC. MetaCat is a product designed to be flexible in its implementation and application. In addition to data entry, MetaCat can also be useful for activities like importing and mapping raw data to MARC, validating previously cataloged collections and verifying the accuracy of your image database linking with the built in image view window.

A major feature of MetaCat is that the interface itself can be exported to other locations. Once the software is loaded on your server and connected to the Internet, data entry operators can begin accessing the system from any location in the world using the Netscape or Internet Explorer web browsers. Think of the possibilities, your organization could solicit the assistance of scholarly experts around the world to contribute metadata information about rare and important material.

Institutions operating in a consortium environment could catalog into a single database using standard formats. Even cumbersome data entry projects could be made much more manageable with an interface that novice operators can use from anywhere and anytime. By constructing templates of your own, your staff controls how the data is entered and can be made as simple or detailed as you like.

Take a look at these other outstanding MetaCat Features:

- Multiple configurations in a single interface
- Expandable routines for verifying/mapping data
- Lock capability on each record
- Add/Edit/View options
- Password screen and login protection
- Batch import/export of MARC records
- Batch import of data via field delimited files

Virtua Integrated Library System

Vista Companion Product Suite

Visual Multimedia & Imaging Solutions

VTLS

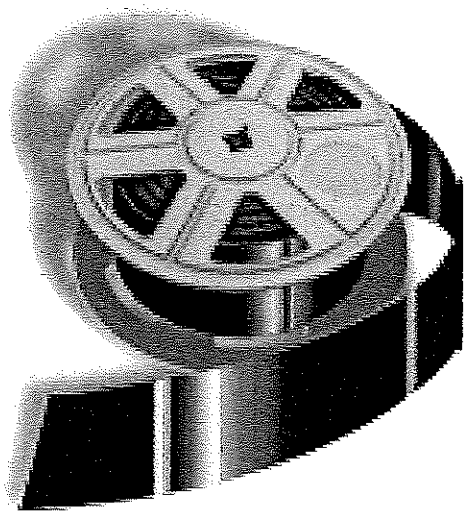
www.vtls.com

VTLS Inc.
1701 Kraft Drive · Blacksburg, VA 24060 U.S.A.
+1540 557-1200 · Fax: +1540 557-1210 · 1800-468-8857

Microfilm Scanning

The recent information technology explosion has created exciting new opportunities for organizations to put their archived film collections in active use. In addition, as your needs and information systems grow, data existing on film may need to be converted to digital files for use on the World Wide Web. VTLS Imaging can help provide these services to your library, historical society, museum and archive. Between VTLS and our partner service bureau network, we have the ability to handle any size job with accuracy, timeliness and exacting quality standards.

VTLS specializes in helping to convert film-based systems to more sophisticated electronic document management systems. Our partners have the ability to convert data from 16mm, 35mm and microfiche to a more versatile digital format like TIFF.



VTLS partner image capture services utilize a combination of interactive and automated scanning procedures, providing you with the best balance of quality, speed and cost performance. Production processes are tailored to meet customers' exacting requirements.

Extensive quality control procedures, experienced project managers, trained operators, and the latest advances in digital imaging processing, support our commitment to delivering the highest quality scanning product available. Our partners utilize Mekel and Sunrise microfilm imaging equipment, commonly accepted as the premier equipment in the industry.

VTLS has been integrating digitized microfilm into online digital databases for over five years. We have extensive experience in putting this digital material to functional use by creating searchable databases, performing associated data entry and programming custom interfaces for display of the files.

To ensure system integration, image files can be output to the media of your choice, in the format and file structure specified. We can deliver data via CD, DVD, optical discs, DAT tape, internet FTP and more. We support all standard formats including: TIFF, JPEG, BMP, GIF, Adobe PDF, among others.

Contact a VTLS sales representative today to find out more about this attractive service. Digitizing your microfilm collections can help you gain immediate access to important materials, accomplish cost-effective distribution and enhance overall image quality. Let our qualified staff devise a microfilm scanning solution that meets your organizations unique needs and requirements.

VTLS Inc. of Blacksburg Virginia, has been helping libraries, historical societies and museums build digital libraries for over 5 years and have been in the library automation business for nearly two decades. The VTLS Imaging & Multimedia Systems group specializes in providing high quality, professional digitization products and services for libraries, archives and museums. Our experienced staff has worked extensively with a wide range of materials including; maps, glass plates, photographs, catalog cards, manuscripts, and microfilm. VTLS turnkey solutions utilize the latest imaging technologies and methods to address all aspects of the digitization process from collection analysis to database creation and interface design.

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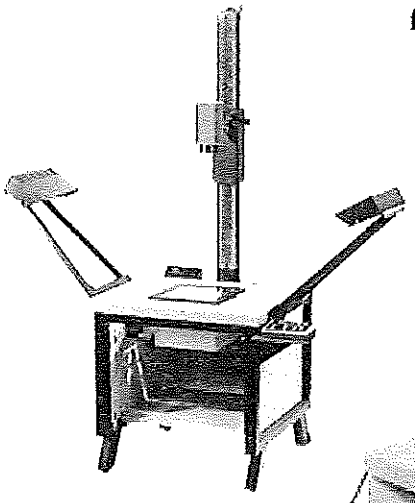
Scanning Services

The affordable prices and wide availability of quality scanning equipment has made it increasingly more attractive for organizations to consider doing their own digitization work. The excitement of taking on a major in-house imaging project is tempting but the reality may be more headache than bargained for. Outsourcing the digitization process to VTLS ensures that your organization receives high quality, professional scanning services without the hassle and long-term investment in equipment, staff and time required to complete it.

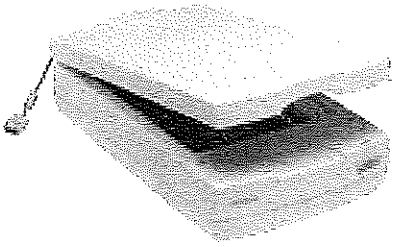


VTLS has been building digital image libraries for over five years and has been a leader in the library industry for over two decades. This unique combination of library and imaging experience sets our company apart from other scanning vendors. Our business is focused on not only providing high quality digitization services, but also helping our customers put that data to use in building online searchable databases, web-based teaching aides and archival collections.

VTLS Imaging offers a wide variety of scanning options with the flexibility to accommodate many different material types. Our services include: bitonal, grayscale, and color scanning of maps, documents, artwork, photographs, slides and microfilm. We can quickly scale up or down to meet the equipment and time requirements of a project and can perform on-site work if material can not be sent to us.

Our staff is experienced in working with rare and fragile material. Special equipment like our ProgRes digital camera and Reprographic copystand can be employed for those materials that cannot be subjected to excess handling or pressure from a flatbed scanner. All precautions are taken to minimize handling of brittle images and all material is stored in our locked vault when not being processed.

In addition to scanning, we also offer image enhancement such as dithering, despeckling, deskewing and manual clean-up to bring out the true nature of the image. For searchable text, we can perform OCR conversion and create PDF files for document distribution.



Images are normally created in a tagged image file format (TIFF), for universal accessibility and high-resolution archival storage and JPEG derivatives are produced for display on the World Wide Web. Other image formats like GIF, MrSID and PhotoCD are available upon request.

The images are delivered on a high quality write once CD-ROM or DAT tape depending on the needs of the customer. Direct loading into a VTLS database is also available for those customers electing to use our search and retrieval software products.

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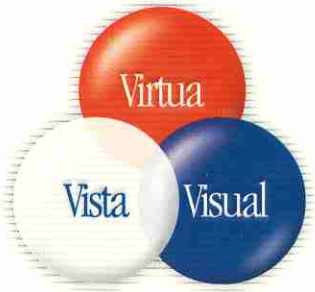
Virtua Demonstration
for
Frederick County Public Libraries
October 26, 2000

8:30 - 9:00	Equipment Setup
9:00 - 9:30	Virtua Status Update
9:30- 10:00	Virtua Chameleon Gateway
10:00 - 10:15	Break
10:15 - 12:00	Virtua Circulation
12:00 - 1:30	Lunch
1:30 - 2:15	Questions/Benefits of Virtua
2:15 - 3:00	Virtua Acquisitions
3:00 - 3:15	Break
3:15 - 4:00	Virtua Cataloging/Serials
4:00 - 4:30	Virtua Web Reports

Thank you for your interest in our products and services.



Enclosed you will find the information you requested. If you did not request a CDROM demonstration of Virtua or Visual and would like one, please let us know by calling **1-800-468-8857** or **+1-540-557-1200**. When calling, request the Virtua CDROM demonstration kit from the receptionist and one will be shipped to you. Or simply e-mail your request to **AskVTLS@vtls.com**.

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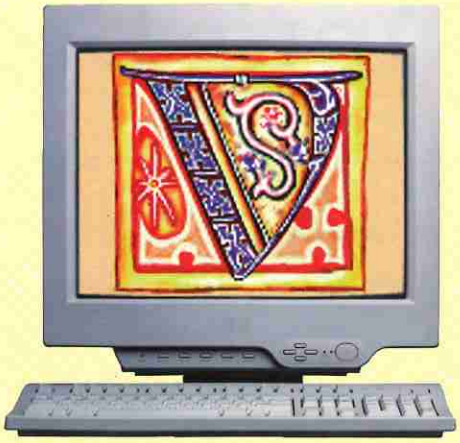
VTLS

VTLS Inc. is an international leader specializing in library automation and information management solutions.



VTLS IMAGING

Imagine...

Your boxed collections transformed...

Why Imaging is Valuable

Imagine building a digital library that allows you to open your special collections to a new audience of researchers. Today, converting original documents into digital images is a reality.

ACCESS is extended to non-local users by digitizing fragile items such as manuscripts or photographs. Imaging also helps organize collections that have become unmanageable because of size, physical location and/or condition.

PRESERVATION of rare items is enhanced by providing users with a high quality digital surrogate while storing originals in a secure place.

Why Choose VTLS

VTLS offers imaging services to libraries, archives, and museums. VTLS imaging solutions are based on flexible design, innovative development and an unwavering commitment to standards. Our imaging staff has extensive imaging and library experience.

VTLS

Imaging Services

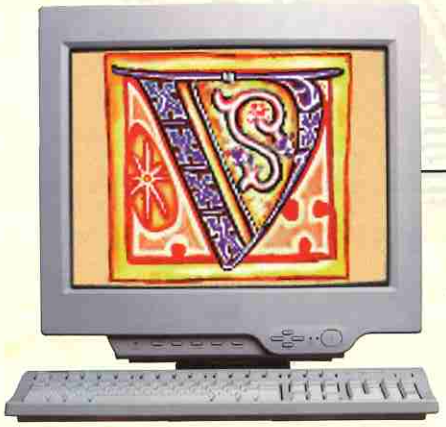
The complexity of imaging projects increases with the size of the collection and with the number of access and media type variables. Consulting with our imaging experts who understand the technology will ensure the successful implementation of a digital environment in your institution.

Consulting Services

Before embarking on an imaging project, careful planning ensures successful digitization. Project planning and workflow management are crucial for your project.

Our consultants have considerable experience in planning and managing large imaging projects and in meeting tight deadlines. We offer consulting in the following areas:

- Collection analysis
- Document analysis and indexing strategy
- Image storage and access issues
- Cost analysis



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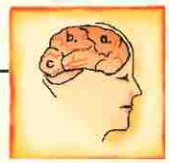
VTLS Imaging Products

Virtua

Virtua, our 3rd generation integrated library system, is designed for the storage and retrieval of images. Its stateless OPAC displays images which are linked to the bibliographic record by the 856 tag.

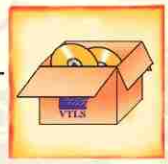
VTLS ImageManager

The VTLS ImageManager is a graphical user interface used by the library to access the digital collection from workstations within the library. The ImageManager can be tailored for each customer to meet project specifications.



Virtua-Web Gateway

The Virtua-Web Gateway is software that makes your library's resources available to any Internet user who has a WWW browser that supports HTML 3.0 tables.



Project Management

VTLS offers two solutions for managing your imaging project. You may select our **Turnkey Project Management** or our **Joint Project Management** solution.

If you select the turnkey solution, VTLS will plan and manage all of the steps involved in your imaging project. The advantages of the turnkey project management solution are obvious:

- **Customers do not need to invest in expensive scanning equipment.**
- **Customers do not have to invest their staff time.**
- **Customers need only provide the materials to be scanned, and make the decision for indexing and storage options.**

With joint project management, the customer can be in charge of several project phases. For example, the customer may wish to handle one or all of the following phases of the project:

- **Document preparation.**
- **Scanning the images.**
- **Quality control.**

*Whatever method you choose for creating your digital library, VTLS tailors **your** imaging project around your **needs** and your **resources**.*

Experience is important when planning imaging projects. Our services range from managing the entire project to supplying only the software and training.

VTLS managed large imaging projects for the Princeton University Libraries and The Library of Virginia. The National Library of Medicine already had their images digitized. They purchased VTLS' Virtua and the Virtua-Web Gateway in order to implement their History of Medicine digital collection.

For the Library of Virginia we converted material from paper, microfilm and slides. More than 120 GB of digital images are stored on a server accessible through the Web. A variety of these images are stored at a higher resolution on Photo-CDs allowing for on-demand, high quality prints.

Continuous innovative development secures your investment. All VTLS imaging systems comply with international standards and use standard file formats. Our products are continuously enhanced to include the most recent technologies, making your investment with VTLS secure.

Look to VTLS for help with your imaging project.

VTLS

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